UNIVERSITY OF PENNSYLVANIA

PUBLIC SCHOOL EDUCATION OF ATYPICAL CHILDREN

ROBERT W. KUNZIG

A THESIS

IN EDUCATION

PRESENTED TO THE FACULTY OF THE GRADUATE SCHOOL IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY

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UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
OFFICE OF EDUCATION
WILLIAM JOHN COOPER, Commissioner

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PUBLIC SCHOOL EDUCATION OF ATYPICAL CHILDREN

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LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
OFFICE OF EDUCATION,
Washington, D. C., July 27, 1931.

SIR: The 1930 White House Conference, called by President Hoover and held under your chairmanship, revealed the fact that approximately 22 out of every 100 children in the United States need special attention either in the form of medical and surgical treatment, professional supervision of feeding and exercise, or instruction under the direction of highly specialized teachers. It was revealed at that conference also that school administrators in the larger cities particularly are aware of these problems and that many have taken some steps toward providing remedies, at least for some of them. Accordingly, it seems worth while from time to time to secure a cross-section study of the provisions made for these groups of children and to record the results of experiments.

Dr. Robert W. Kunzig, in the preparation for his Ph. D. degree, gathered, under the direction of the faculty of the University of Pennsylvania, much data which seems to this office valuable to superintendents. From the material gathered for his dissertation, Doctor Kunzig has prepared a manuscript which I transmit herewith, and recommend that it be published as a bulletin of this office.

Respectfully submitted.

WM. JOHN COOPER,
Commissioner.

The SECRETARY OF THE INTERIOR.

PUBLIC SCHOOL EDUCATION OF ATYPICAL CHILDREN

PART I. STATE CONTROL IN STATES IN WHICH THERE ARE CITIES OF OVER 100,000 POPULATION

Introduction

A. Purpose and Plan of the Study

The purpose of this study is primarily to analyze the educational opportunities being offered at present to atypical[1] children by public-school boards in the large cities of the United States and to determine the "unit costs" of this education. State laws relating to the instruction of these children, in so far as it is controlled by local public-school boards, will be presented in tracing the relationship between the legislation and local initiative.

Part I (State control in States in which there are cities of over 100,000 population)[2] deals with the provisions in the State laws relative to the establishment of atypical classes, the nature of the State aid provided, the trend of this legislation, and the organization and administration of State departments of special education. This material serves as a background for the analysis of the local situation which follows in Part II.

Part II (Provisions made in cities of over 100,000 population)[3] presents the rôle of the city in atypical class organization. First, there is a statistical analysis of the atypical class situation as it exists in the large cities. This is followed by a description of the local organization and administration of special classes, and the cost of special education to the local public school boards. Comparisons are made among the various cities as to existing special classes and the relative cost for their maintenance.

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[1] "Atypical" children are understood to be those pupils requiring special facilities or instruction because of physical, mental, or moral deviation from the average (blind, deaf, mentally defective, gifted, disciplinary, etc.).

[2] There are 30 of these States (1920 census). They are as follows: Alabama, California, Colorado, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Virginia, Washington, and Wisconsin.

[3] There are 68 of these cities (1920 census). See Table 1, Pt. II.

B. Scope

The scope of this study embraces the legal basis, the cost, and the extent of development of special educational facilities for atypical children under local school board control in the 68 cities of over 100,000 population (1920 census). While many of the smaller cities are making considerable progress in developing special classes, it is believed that the largest cities represent all possible types of organization. This would presumably follow because of the larger number of children to be provided for in the latter cities and the greater opportunity to develop a better organization. It was therefore decided to limit this study to the atypical class organization in the 68 cities referred to above.

In order to evaluate the city's accomplishment in special class organization, it is necessary to know the legislation of the State relative to this matter. The States selected for study were those which contained the cities under consideration. The omission of the other States (18 in number) has not affected this investigation, inasmuch as none of them has enacted legislation dealing with classes for atypical children in the public schools with the exception of Wyoming. This State has legislated (1919, sec. 2364) that the State board of education shall provide for the education of speech defectives and for those children who are physically or mentally handicapped. Among the group of 18 States referred to above, Maine, North Carolina, West Virginia, New Mexico, North Dakota, and Oklahoma deserve commendation for having extended the range of years during which certain atypical children are required to attend school.

C. Sources and Procedure

Data pertaining to the function of the State in special education have been procured mostly from the State laws on education, State regulations and bulletins, and from questionnaries submitted to the State directors of special education or the superintendents of public instruction. The city data have been obtained chiefly from the regulations, bulletins, and superintendents' reports issued by the cities and from questionnaires sent to the financial officers of boards of education, directors of special education, supervisors, principals, and teachers. All of the preceding sources are supplemented by material gathered from bulletins of the United States Office of Education and from articles in books and periodicals dealing with public-school education.

The procedure was as follows: A preliminary correspondence with the officials of the 68 cities showed that it was not feasible to rely solely on available printed matter dealing with atypical classes. After securing direct information from all of the cities as to the types of

atypical children for whom they provided, as many questionnaires were sent to the cities as there were types of classes. The number of types within a city ranges from 1 to 16. These inquiries requested considerable information concerning the organization of each type of class. They were answered by any one of the following persons: Assistant superintendent, director, supervisor, principal, or teacher.

Questionnaires were sent at the same time to the fiscal officer of the board of education of each city requesting data as to each item of current expense under the various atypical types. State superintendents of public instruction and State directors of special education were also recipients of questionnaires to which replies were received from all the States.

All these inquiries were sent out during March and April, 1929. In October, 1929, briefs of the present State laws dealing with public education of atypical children were sent to each of the States, requesting comments and corrections. A complete reply was received to this last inquiry.

D. Background

Very slight attention was paid to special provision for atypical children in the public schools prior to the beginning of the twentieth century. Since that time various factors have led to a closer segregation of atypical types than had previously existed. Prominent among these influences have been the extension of the compulsory school laws [4] and the more effective enforcement of existing laws, the tendency to study child nature more closely than formerly, and the use of psychological and standardized educational tests which revealed the large differences existing among children. Furthermore, the development of medical inspection in the schools has shown the need for segregation and special treatment of children having various physical defects. Many studies have been made in recent years concerning courses of study and methods to be pursued in the training of the different atypical types, but as these phases of the subject are not emphasized in this investigation, no further mention of them will be made at this point.

The first important statistical study embracing all types of special education was made in 1911 by Van Sickle, Witmer, and Ayres.[5] They sent questionnaries to all municipalities organized under a superintendent, requesting the names of the types of special classes that were organized. This bulletin presents the numbers and percentages of the cities providing for the various types. The remainder of the report discusses the historical development of the recognition

[4] In 1894–95 there were 19 States which had no compulsory school law; in 1920 every State had such a law.

[5] Provision for Exceptional Children in Public Schools. Washington, Government Printing Office, 1911. U. S. Bureau of Education. Bulletin No. 14.

of atypical groups, the methods in use for determining the extent and degree of retardation of pupils, and the selection and training of teachers.

A book by Horn,[6] published in 1924, considers the extent of special class development in the 68 cities of 100,000 population (1920). He found that 21 of the cities had not yet made provision for special education. Statistics are presented showing the number of atypical pupils and classes in each city. The lowest 3 per cent, however, are considered as institutional, and the highest 3 per cent as "not educable in groups." Moreover, no special consideration is given to those afflicted with ailments requiring open-air classes.

Wallin,[7] in 1924, discussed the organization of classes and suggested a policy for the treatment of handicapped children, but confined his attention chiefly to the mentally subnormal, with only occasional reference to the other types. He stated: "No accurate data are available concerning the number of cities maintaining special classes or concerning the grades or kinds of subnormals assigned to different kinds of special classes." [8]

The cost of special education is not mentioned by either of the preceding authors, and the State laws pertaining to atypical classes are discussed only casually by Wallin. Both these points are to be stressed in the present study. The Educational Finance Inquiry Commission, in making a survey of New York State in 1923, found that "It was not possible, from the reports available in the State office, to segregate the costs of various types of special work." [9] No investigation has been found which gives any indication of the comparative costs for special education in the cities included in this study, although tabulations and comparisons of the costs of other divisions of city school systems are common procedures. Of course, a number of the larger cities have made analyses of their own costs in this field.

Statistical studies of some of the atypical types have been made in recent years, but usually only one type is considered at a time—rarely a comparison among the different groups of atypical classes. Haines,[10] in 1922, discussed the public-school facilities for mentally handicapped children and gave data showing the number of pupils and classes in all cities of 25,000 population or over.

The city of Rochester [11] made a similar but more comprehensive study of conditions prevalent in 1925 relative to classes for the

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[6] Horn, J. L. The Education of Exceptional Children. New York, Century Co., 1924.

[7] Wallin, J. E. W. The Education of Handicapped Children. New York, Houghton Mifflin Co., 1924.

[8] Wallin, J. E. W. The Education of Handicapped Children. New York, Houghton Mifflin Co., 1924. p. 39.

[9] The Financing of Education in the State of New York. Educational Finance Inquiry Commission, 1923.

[10] Haines, T. H. Special Training Facilities for Mentally Handicapped Children in the Public Day Schools of the United States, 1922-23. Mental Hygiene, 8: 893-911 (1924).

[11] Special Education in the United States. Board of Education, Rochester, N. Y.: Report of the Child Study Club of Rochester, 1928.

mentally subnormal in the 68 cities of 100,000 population. In addition to data as to number of mentally retarded, number of classes, and ages of pupils, this study also embraces facts concerning the salaries of teachers, their teaching load, and time required for home visitation.

On the legal side a number of researches have been made, but always for one or two types only—never a composite picture of the whole situation. Among these may be cited an analysis by Haines [12] of laws dealing with classes for the mentally handicapped, a digest of laws on the education of crippled children by the United States Bureau of Education,[13] and a master's thesis by Steiner [14] which deals with legislation in the 48 States relative to the education of crippled and feeble-minded children.

In none of the preceding references is there any comparison made among all of the atypical groups. It is thought that a more integrated impression may be obtained by a discussion of the laws dealing with all types and by the presentation of data showing the organization, administration, and cost of these types. An administrator may then more readily evaluate his own organization in the light of the prevailing practice throughout the United States.

E. Definitions

"Special education" has been defined in all questionnaires sent out in this study as follows:

> Special education (in this inquiry) includes only those types requiring special facilities or instructors because of physical, mental, or moral deviation from the average (blind, deaf, mentally defective, gifted, disciplinary, etc.).

No attempt was made to establish criteria as to what constituted blindness, deafness, and the other atypical types. The classifications of the various cities based on the above definition of special education have been accepted, and interpretations made in the light of the data received. It is realized, of course, that different cities may employ somewhat different criteria for the various atypical groups.

Only the special education under the control of public-school boards is considered in this study.

The terms "atypical" and "exceptional" are used interchangeably with the term "special" in such expressions as "atypical education" and "special classes."

For most purposes of comparison in the following chapters the atypical groups have been divided into eight main classifications:

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[12] Haines, T. H. State Laws Relating to Special Classes and Schools for Mentally Handicapped Children in the Public Schools. Mental Hygiene, 9: 529–555 (1925).

[13] Keesecker, W. H. Digest of Legislation for Education of Crippled Children. Washington, Government Printing Office, 1929. U. S. Bureau of Education, Bulletin No. 5.

[14] Steiner, J. W. Legal Provisions for the Education of Crippled and Feeble-Minded Children in the 48 States. Master's thesis, 1928. Ohio State University, Columbus, Ohio.

Blind, crippled, deaf, open-air, speech, disciplinary, mentally subnormal, and gifted. When these eight designations have been employed they include the following types:

"Blind" refers to the totally blind and the partially sighted. Classes specifically for the partially sighted are designated as "sight saving."

"Crippled" refers to those children who are permanently or temporarily deprived of the use of one or more limbs.

"Deaf" includes the totally deaf and the partially deaf. Classes specifically for the partially deaf are designated as "hard of hearing."

"Open-air" includes all physically defective children in special classes except the blind, crippled, deaf, and speech defectives. These would include the following: Tubercular or pretubercular, malnourished, underweight, anæmic, and cardiac.

"Speech" embraces all children having speech defects.

"Disciplinary" refers to those who are incorrigible, and would include pupils assigned to disciplinary classes or schools, to parental schools, or to schools or classes established in connection with probation courts, etc.

"Mentally subnormal" comprises both the mentally defective and the backward.

"Gifted" includes those children with a mentality far above the average, receiving special instruction in separate classes.

The "cities" referred to hereafter (unless otherwise specified) are the 68 of over 100,000 population (1920 census).[15]

The "States" [16] referred to hereafter (unless otherwise specified) are the 30 States in which the 68 cities are located.

The classification (in most of the tables of this study) of the States and cities into certain divisions of the United States is similar to that employed in the United States census, except that the following combinations have been made for greater simplicity. The New England and Middle Atlantic Divisions have been merged into the North Atlantic, East North Central and West North Central into North Central, East South Central and West South Central into South Central, and Mountain and Pacific into Western. In each division, at least half of the States are represented in this study, except in the Western Division, where but 5 of the 11 States are included. It is believed that the grouping of the States will more clearly indicate any sectional characteristics that may exist.

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[15] See Table 1, Pt. II, for list of these cities.

[16] See footnote 2 for list of these States,

Chapter I

State Laws Relating to Education of Atypical Children in the Public Schools

In general, the several States have maintained institutions for the blind and the deaf for many years. Those children, however, who have been unable to attend State or private institutions for the deaf or blind have received little assistance. Some local communities have organized special classes [1] for various groups without the encouragement or assistance of the State; others have paid slight attention to the needs of atypical [1] children.

What can the State do to ameliorate these conditions? There are certain definite steps which may be taken. It may enact legislation which permits or requires the establishment of special classes for atypical children. Standards may be set forth to be met by all local units. A more equitable distribution of State funds may be made, so that the burden of the smallest unit is no greater proportionately than that of the largest, or special State aid may be given for the maintenance of atypical classes.

What has the State done to improve the educational facilities for the atypical child? What laws have been passed? What financial aid is given? What is the trend of the legislation concerning the public-school education of atypical children? These and similar questions are to be discussed in this chapter.

A. Permissive and Mandatory Legislation as to Establishment of Classes

1. *Size of community to which law applies.*—Twenty-five of the thirty States being considered have some provision for atypical children.[2] The laws of all but five of these States apply to the large as well as the small school districts.[3] The exceptions are: Alabama requires that "the school committee or board of every town of 6,000 population * * * shall establish special classes." [4] A 1923 Oregon statute reads: "The board of directors of any such district (10,000 or more inhabitants) is hereby authorized * * * to establish * * * special schools." On the other hand, a 1929 Oregon law, which refers only to the physically handicapped, requires "every school district within the State of Oregon to provide * * * for * * * physically handicapped children (under certain conditions)." Utah requires first-class cities to establish certain classes, but permission is extended to all other local units. This enactment reads: "The board of education of any city of the first class shall, or the boards of education of

[1] See Introduction for definition of this term.

[2] It should be recalled that 30 States only (those containing cities of over 100,000 population—1920 census) are included in the analyses throughout this study. These States are listed in footnote 2, Introduction.

[3] See notes to Table 3.

[4] All legal citations and references are from the most recent school laws (of the States) dealing with atypical children, unless otherwise specified. These laws are listed at the end of Part I.

any other school district may, provide special schools and classes." Washington limits an enactment relative to the mentally subnormal to first-class districts, the law providing that: "The board of directors of a school district of the first class is authorized to establish and maintain schools for * * * defective youths." However, another Washington law limits parental schools to cities of 50,000 and over. Illinois makes the establishment of parental schools mandatory in cities of 100,000 population or over, and permissive in cities of 25,000 to 100,000 population.

Thus, five of the 25 States make some restriction as to the size of the school district to which the legislation applies.

2. *Agency having authority to establish a special class.*—In 27 of the States school boards have authority to inaugurate classes of their own volition, without initial sanction of the State. The designations applied to bodies having this authority are very similar. The usual phrases are "board of education," "board of directors," or "local school committee." The Louisiana law, however, refers to "parish school boards" and that of Maryland to "county boards of education." In four States the districts must first secure approval from some higher authority. The law of Minnesota on this point reads: "Upon application of any special, independent, or common school district made to the commissioner of education, he may grant permission to establish one or more schools for (blind, deaf, etc.)."

The Wisconsin law is worded almost exactly like the preceding quotation. The Nebraska statute permits boards to establish disciplinary classes without State permission, but requires the initial approval of the State to start day schools for the deaf. This latter provision states: "Upon application by a school board, district board, * * * or board of education in any city * * * the State superintendent * * * shall grant permission * * * to establish * * * day schools * * * for the deaf."

The laws of Ohio give authority to the "director of education (to) grant permission to any local board to establish * * * classes for the instruction of deaf or blind * * * or crippled."

Note that in the case of Minnesota, Wisconsin, and Ohio the head of the State educational department "may" grant permission to establish classes, whereas the Nebraska law specifies that he "shall" grant permission in case of schools for the deaf. The four States which require initial approval by the State authorities are all located in the North Central Division. Apparently these States desire to see that certain regulations have been complied with before they permit the establishment of atypical classes.

3. *Definitions of various atypical types as contained in the State laws.*—It is at times difficult to determine the exact atypical groups included in a State law referring to special education. This is due to the fact

that the authorities of different States have frequently used terms which are vague, undefined, or which vary in meaning in different parts of the country. Table 1 gives all of the terms whose meaning is not immediately clear without further definition. Although some of these designations give an indication of the type intended—e. g., those listed under "mentally subnormal" and "physically defective"—others—for example, "exceptional" and "defective"—offer no assistance in this respect.

TABLE 1.—*Some designations applied to atypical children in State laws* [1]

Types	States	Designations employed in State laws
Mentally subnormal	Alabama	"Mentally retarded."
	Kansas	"Retarded."
	Louisiana	"Mentally deficient."
	Massachusetts	"Mentally retarded."
	Minnesota	"Mentally subnormal."
	New York	"Retarded mental development."
	Pennsylvania	"Gravely retarded."
Physical defectives	California	"Physically handicapped."
	Indiana	"Physical disability."
	Maryland	Do.
	New York	"Physically defective."
	Oregon	"Physically handicapped."
"Exceptional"	Connecticut	"Educationally exceptional."
	Oregon	Do.
	Pennsylvania	"Exceptional physical or mental condition."
	Wisconsin	"Exceptional."
"Defective"	Missouri	"Defectives."
	Washington	"Defective youth."
Miscellaneous	Illinois	"Specially handicapped children."

[1] States are arranged alphabetically for each type.

Table 2 presents a complete picture of the various terms employed to indicate the mentally subnormal in the 15 States having legislation for this type. Thus Table 1 is intended to illustrate the general need of clarification of terms for all types, whereas Table 2 shows the variability of terms employed in one type alone.

It will be noted from this table that the mentally subnormal are defined in a very similar manner by 6 of the 15 States. Massachusetts uses the phrase, "Three years or more retarded in mental development"; New Jersey, "three years or more below normal"; New York, "three years or more retarded in mental development"; Illinois, "three years retarded in school grades"; Kansas, "three years or more retarded in school grades"; Alabama, "three years or more mentally retarded." The preceding designations are satisfactory only if all factors are considered. These criteria should not only comprise age and grade but time in school as well. In the case of 3 of the 15 States—Minnesota, Louisiana, and Washington—no definition of subnormal is given in the law. The definitions of California, Missouri, and Pennsylvania are not exact as to the limits of subnormality. Connecticut, Oregon, and Wisconsin have included the mentally subnormal in the designation "exceptional," in the definition of which the children to be considered as subnormal are not

clearly specified. Of course many of the State departments of education have more clearly defined the terms and interpreted the law but it is probably better that the law be entirely definite on this point in order that misunderstanding may be avoided.

TABLE 2.—*States permitting or requiring classes for the mentally subnormal with definitions of eligible pupils* [1]

States	Designations employed in the laws	Definitions contained in the laws
NORTH ATLANTIC DIVISION		
Connecticut	"Educationally exceptional"	See text.
Massachusetts	"Mentally retarded"	"Three years or more retarded in mental development."
New Jersey		"Three years or more below the normal."
New York	"Retarded mental development"	"Three years or more retarded in mental development."
Pennsylvania	"Gravely retarded"	"Gravely retarded in school work."
NORTH CENTRAL DIVISION		
Illinois	"Specially handicapped"	"Three years retarded in school grades." [2]
Kansas	"Retarded"	"Three years or more retarded in school progress."
Minnesota	"Mentally subnormal"	None.
Missouri	"Defectives"	"Feeble-minded, yet capable of instruction; dull, yet unable to profit in regular grades."
Wisconsin	"Exceptional"	See text.
SOUTH CENTRAL DIVISION		
Alabama	"Mentally retarded"	"Three years or more mentally retarded."
Louisiana	"Mentally deficient"	None.
WESTERN DIVISION		
California		"Who would profit more from a course other than the regular course."
Oregon	"Educationally exceptional"	See text.
Washington	"Defective youth"	None.

[1] States are arranged alphabetically within sections of the country.
[2] Or the mental equivalent in retardation for those children who have not had three years in school.

"Physically handicapped" in the California law [5] includes the blind, partially sighted, deaf, hard of hearing, crippled, and "such other physically handicapped individuals as the superintendent of public instruction may designate." Neither Indiana nor Maryland specifies the types comprised by the term "physical disability," but correspondence with the State authorities indicates that all physical types are included, i. e., blind, crippled, deaf, anæmic or tubercular, and speech defective. "Physically defective" in the New York law [5] includes all physical atypicals except speech defectives. A 1929 law of Oregon defines the term "physically handicapped" as follows: "A physically handicapped child is defined to be a person * * * who by reason of physical impairment can not take advantage of the ordinary educational facilities * * * and whose said incapacity shall have been continuous and extending over a period of at least

[5] Interpretations of the laws have been checked (October, 1929) by correspondence with all of the State departments of education.

two (2) months." This law embraces all physical types of atypical children.

The expression "exceptional" is employed by Connecticut, Oregon, Pennsylvania, and Wisconsin. The Connecticut statute in defining "educationally exceptional" states that it shall include "all children over 4 and under 16 years of age, who because of mental or physical handicap * * * need special educational provisions." This comprises all types except the disciplinary and gifted. An Oregon law reads as follows:

> The term educationally exceptional children shall include any child between the ages of 6 and 17 years, both inclusive, who is not receiving proper benefits from the ordinary instruction in the public schools, either because of exceptionally keen mental qualities or because of mental or physical handicap.

This law has been held to embrace all possible types. Furthermore, Oregon is the only State of the 30 considered in this study that expressly refers to the gifted. Neither the Pennsylvania nor the Wisconsin enactment defines the term "exceptional." In Pennsylvania the reference is to "exceptional physical or mental condition" and in Wisconsin to various physical defectives and "exceptional children." Pennsylvania has used the word "exceptional" in the sense of the unusual, whereas Wisconsin intends it to refer to mental types only; that is, to the gifted and the mentally subnormal.

"Defectives" in the law of Missouri includes the blind, deaf, crippled, speech defectives, and mentally subnormal; "defective youth" in the Washington statute comprises only the mentally subnormal.

"Specially handicapped" is the phrase used in the Illinois law. It is defined as follows:

> (*a*) All children of school age who are three years retarded in school grades or the mental equivalent in retardation in those children who have not had three years in school.
>
> (*b*) All children of school age who are delinquent; that is, those who display antisocial tendencies, incorrigibility, or any similar characteristics.
>
> (*c*) All children of school age who, in the opinion of the teachers, are different or stand out from the others by reason of physical or mental handicaps.

This law would seem to include all physical and disciplinary types and the mentally subnormal. However, the superintendent of public instruction, in a recent letter to the writer, states that "there are no provisions in the general school law of the State relating to open-air and defective-speech schools."

The preceding discussion illustrates the need of a greater uniformity and clarity in the designations and definitions applied to atypical children in the laws of the various States. Otherwise there may result misunderstanding and litigation, which can only eventuate in harm to the cause of those atypical children for whom these laws have been devised.

TABLE 3.—*Provision in State laws of permissive or mandatory public-school classes for atypical children* [1]

State	Permissive (P) or mandatory (M) classes								Explanatory notes
	Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Mentally subnormal	Gifted	
1	2	3	4	5	6	7	8	9	
NORTH ATLANTIC DIVISION									
Connecticut	M	M	M	M	M		M		Mandatory when requested by parents of 10 or more children.
Massachusetts	P*		P				M		*Sight saving.
New Jersey	M	M	M			P	M		*Blind and sight saving.
New York	M*	M	M	M		P	M		*Blind and sight saving.
Pennsylvania	M*	M	M▲	M	M	M	M	M	*Blind and sight saving. ▲Deaf and hard of hearing.
NORTH CENTRAL DIVISION									
Illinois	P*	P	P			P▲	P		*Blind and sight saving. ▲Disciplinary classes permissive but parental schools mandatory in cities of 100,000 or over.
Indiana	P*	P	P▲	P	P				*Sight saving. ▲Hard of hearing.
Iowa			P						
Kansas									
Michigan	P*	M	P▲				P		*Blind and sight saving. ▲Deaf and hard of hearing. Law applies if parents of 5 or more children request classes.
Minnesota	M*	P	P		P		P		*Permissive if there are 5 or more pupils, but mandatory if requested by parents of 8 or more pupils.
Missouri	P	P	P		P		P*		*The law specifies "dull and feeble-minded."
Nebraska			P			P			
Ohio	P*	M	P▲	P					
Wisconsin	P	P	P	P	P		P	P	*Blind and sight saving. ▲Deaf and hard of hearing.
SOUTH ATLANTIC DIVISION									
Maryland	P	P	P	P	P				
SOUTH CENTRAL DIVISION									
Alabama									
Kentucky	P*						M*		*Mandatory in towns of 6,000 population or over.
Louisiana	P	P	P	P	P	P	P		*Sight saving classes only.
Tennessee					M*				*For tubercular children only.

WESTERN DIVISION

California	P*		P		P▲		P		P		P		P		P		P					
Oregon		M*		M*		M*		M*		M*			P				P					
Utah												M*										
Washington											P*		P▲									
Subtotal	11	6	8	7	13	5	6	5	7	3	8	2	9	6	3	1						
Total enactments	17		15		18		11		10		10		15		4							

*Blind and sight saving. ▲Deaf and hard of hearing.
*Elementary instruction in special classes is mandatory; special classes for grades 9 to 12 are permissive.
*Disciplinary classes mandatory in cities of first class; permissive in smaller cities. Parental schools are permissive in any city.
*Cities of over 50,000 permitted to establish parental schools. ▲Cities or 10,000 or over.

[1] 30 States only (those containing cities of over 100,000 population) are considered in this analysis. Of the remaining 18 States, Wyoming is the only one making special legislative provision for exceptional children. Since this manuscript was prepared, Virginia at its 1930 legislative session provided for the establishment of public-school classes for the blind or partially sighted.—EDITOR.

4. *Comparisons among States concerning statutory provisions for establishment of atypical classes.*—Table 3 points out the permissive or mandatory character of the laws of the States referring to atypical children. Six of the States have passed no legislation dealing specifically with this problem. They are: Rhode Island, Delaware, Georgia, Virginia,[6] Texas, and Colorado. Four of the six are in the Southern Division. Concerning the omission of these laws from the statutes, two of the State administrators (Delaware and Texas) have written to the writer as follows:[7]

> Special education in Delaware can be taken care of by special teachers in each school system where the system is large enough to bring together enough children to justify a special class of say from 10 to 15. We have such classes in a few schools, but where there are numerous 1-teacher schools the procedure is next to impossible; hence, one reason for our effort to discontinue this type of school.
>
> There has been no legislation in Texas which is helpful to atypical children.

The heads of the departments of education of Rhode Island, Georgia, and Colorado merely referred in their correspondence to existing State institutions, without any further comment on the absence of legal enactments concerning special classes in the public schools.

Referring to Table 3, it is seen that more acts have been passed dealing with the deaf than with any other type. Eighteen, or 60 per cent, of the 30 States considered have made some provision for this group. The other types in order of occurrence are: Blind, 57 per cent; crippled, 50 per cent; mentally subnormal, 50 per cent; open air, 40 per cent; speech, 33 per cent; disciplinary, 33 per cent; and gifted, 13 per cent.

Of all the laws for a given type, what percentages are mandatory? Table 3 shows that 45 per cent of the open-air enactments are mandatory; crippled, 47 per cent; mentally subnormal, 40 per cent; blind, 35 per cent; speech, 30 per cent; deaf, 28 per cent; gifted, 25 per cent; and disciplinary, 20 per cent. These percentages, of course, must be considered in relation to the numbers involved.

It is significant to note that most of the enactments of the North Atlantic States have been mandatory, whereas practically all of those of the North Central States are permissive. While this indicates a certain unanimity of opinion within these sections, it would be of interest to know the impelling motive for the dissimilar legislation. The other divisions of the country, especially the South Atlantic, have passed little legislation of any character dealing with special education.

The Pennsylvania law is unique in that classes for all types are mandatory and special State aid is provided for all. A minimum of

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[6] More recently (in 1930) legislation has been enacted in Virginia, permitting the establishment of public-school classes for the blind and partially sighted.—EDITOR.

[7] Correspondence with State educational authorities during October, 1929.

10 pupils is provided in this act. Reference to Table 1, Part II, however, indicates that some of the largest Pennsylvania cities are disregarding this mandatory legislation. Connecticut requires classes to be established for six types of atypical children when requested by the parents of 10 or more pupils. Table 1, Part II, indicates that the three largest cities of this State have failed to establish many of these classes. The director of special education of Connecticut has stated in a recent letter that the law "functions almost entirely on the permissive basis." The communication reads, in part:

> The law applies only to petition made by the parents of 10 or more educationally exceptional children. Otherwise the law is a permissive one and functions almost entirely on the permissive basis, the mandatory clause having been invoked on only one occasion. The legislative session held last year (meets biennially) failed to pass the bill requesting State aid for special classes.

Possibly, if State aid were given, more cities would observe the mandatory provision. Reference to Table 3 indicates that Massachusetts has little legislation applying to atypical children in the public schools. A letter from the supervisor of special schools and classes points out that the "crippled children are sent in large numbers to the Massachusetts Hospital School, where they are educated at the expense of the Commonwealth." The enactment of this State concerning the deaf is of interest. The director writes:

> The statement with reference to the establishment of day classes for the deaf simply means that the State department has been authorized to establish classes in six towns or cities. It does not limit the number of classes which may be established by a town. We have so far established classes in Lynn, Worcester, and Springfield. If we finally establish the full number of six and it seems desirable to establish others, the legislature would unquestionably change the law. This was the first law of this kind to be enacted, and the legislature undoubtedly limited it to six towns and cities in order that the success of the project might be determined.

The fact that classes for the subnormal are mandatory in five of the six North Atlantic States indicates that the authorities of that section of the country have given much fuller legal recognition to this problem than have the other States.

Of the North Central Division, Iowa, Kansas, and Nebraska have enacted laws for only one or two atypical groups. Iowa endeavored in the last legislative session to pass an act embracing physically handicapped children, but was not successful. Referring to legislation for handicapped children, the director of the Board of Vocational Education of Iowa has written:

> Several bills were proposed but none of them passed, with the exception of a measure authorizing the State superintendent of public instruction, together with a committee from the legislature, to make a special investigation of the entire subject. Up to the present time there has been no announcement as to the policy or scope of this investigation.

Indiana permits classes for all physical atypicals; Wisconsin for all physical types, and for mentally subnormal and gifted as well.

In the South Atlantic Division, Maryland is the only State of the four concerned which provides for atypical children. The Maryland law permits classes for all physical defectives, and yet, according to the State superintendent, very few classes have been established except in Baltimore. In a recent letter he states:

> The section of chapter 165, Laws of 1914, which you quote, has not been acted under except in a few counties of the State. I am quite sure, however, that any county would be upheld in interpreting this law in its broadest implications. The legislature of 1929 appropriated $10,000—$2,000 per class for classes of crippled children in the counties of Maryland. Of course, Baltimore city is doing a great deal in this special field, but the counties have not yet done much. * * * It is likely that the next legislature will subsidize a certain number of special classes in the counties.

The South Central Division of States has very few enactments relative to special classes. Alabama requires classes for mentally subnormal children in towns of 6,000 population or over, but apparently the law is not being enforced in view of two recent letters from the director of exceptional education. A communication of April 5, 1929, reads:

> Alabama has not yet gone very far in providing for special education. Alabama has a law which permits (the law makes these classes mandatory)[8] the operation of special classes in the State and giving the State the right to appropriate money for the assistance of school boards in teaching mental defectives, but does not make such appropriation mandatory, and the bill does not provide any fund for such education. There is a fund provided for the eradication of illiteracy, and the State may give aid for such special education from this fund.

The director was asked whether the law did not require that classes for the subnormal should be established. A reply of November 1, 1929, stated:

> I note that you have interpreted the law concerning the teaching of mental defectives, and state that the law seems to be mandatory. No law can be mandatory which does not provide the means for enforcing it. Alabama is doing preparatory work for providing special educational opportunities for mental defectives.

This is the only mandatory legislation in the Southern States, except the required tubercular classes in Tennessee. Louisiana has a permissive act embracing all types except the gifted, but the State superintendent writes that the law has not been acted upon. He states, in part:

> The parish school boards still have the authority to organize special classes for special groups of children, but the law has not been acted upon, except that in the larger schools children are usually grouped on the basis of their mentality,

[8] Insert by writer.

and the city of New Orleans maintains special classes for children handicapped physically or mentally.

The Western Division of States has passed some legislation for atypical children, but almost entirely by the three Coast States—Washington, Oregon, and California. The last two provide for all special types, as does Pennsylvania. These three States are the only ones of the 30 comprised in this study having legislation embracing all atypical groups.[9] Utah requires disciplinary classes in first-class cities and permits parental schools in cities of any size; however, no parental schools have been established, according to the following letter from the State superintendent of public instruction:

* * * Let me say, however, that while the law provides for the establishment of parental schools, no parental schools have been established by the districts throughout the State. Our active field of operation has been in the establishment of classes for the young people generally from 14 to 18 years of age who do not seem to get along well in school with the regular subjects of the curriculum.

Washington permits parental schools in cities of 50,000 or over and mentally subnormal classes in cities with a population of at least 10,000.

Considering now the entire group of 30 States, it is seen from Table 3 that physical defectives of the five possible types are included in the legislation of 8 States—Connecticut, Pennsylvania, Indiana, Wisconsin, Maryland, Louisiana, California, and Oregon. Two of these States are from the North Atlantic Division, 2 from the North Central Division, 2 from the Southern Division, and 2 from the Western Division. This would indicate a general interest in physically defective children. It must be recalled, however, that a number of these States have reported a lack of observance of this legislation.

Of the 17 States having legislation relative to classes for the blind, the laws of the following 6 definitely specify or have been interpreted[10] to include both classes for the blind and sight-saving classes: New Jersey, New York, Pennsylvania, Michigan, Ohio, and California. Massachusetts, Kentucky, and Indiana specify sight-saving classes only; the blind are to go to State institutions.

Fifteen States have made some provision for the deaf in the schools; four of them definitely include classes for the hard of hearing as well as for the deaf. They are: Pennsylvania, Michigan, Ohio, and California. Indiana permits hard-of-hearing classes only, the deaf being required to attend a State institution. It is of interest to note that 9 of the 10 States of the North Central Division have enacted some legislation for this group of defectives.[11]

A comparision of the preceding statements will show that four States provide legally for classes for blind, sight-defective, deaf, and

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[9] See Table 3 for summarization of legal enactments.

[10] Letters from State authorities during October, 1929.

[11] See Table 3.

hard-of-hearing children. These States are: Pennsylvania, Michigan, Ohio, and California.

The laws of 28 of the 30 States included in this analysis specify or imply that the classes are for elementary instruction only. Oregon and California, on the other hand, have made some reference to secondary education. Oregon makes the establishment of elementary classes mandatory for physically handicapped children, but also permits high-school classes to be inaugurated. California states specifically that special aid will be given for high as well as for elementary classes. This is a noteworthy progressive step in the field of special education. It is entirely possible that, where permission to inaugurate classes is provided in the statutes, high-school as well as elementary classes could be legally established. However, it is a question whether State aid would be given for the high-school classes in the absence of definite provisions unless the courts sanctioned this procedure.

B. Permissive and Compulsory Attendance Ages of Atypical and of Normal Children—Number Required in a Class

Data showing the range of attendance ages for both atypical and normal children are presented in Tables 4 and 5. Where no special compulsory age for atypical children has been proposed in the law, it may be assumed that the State will not insist on their attendance in an educational institution or in special or regular classes or schools. If no permissive age has been established, the atypical pupils may no doubt attend school as long as do the regular children, unless they complete the education provided for them before attaining the maximum permissive age.

TABLE 4.—*Comparison of compulsory attendance ages of normal and atypical children* [1]

States	Attendance ages						Explanatory notes
	Normal	Atypical					
		Blind	Crippled	Deaf	Mute	Feeble-minded	
1	2	3	4	5	6	7	
NORTH ATLANTIC DIVISION							
Connecticut	7–16	4–16	4–16	4–16	4–16	(*)	*May be committed to State institutions.
Massachusetts	7–16	(*)	(*)	(*)	(*)	(*)	*Any child having physical or mental condition capable of correction is required to attend school.
New Jersey	7–16	(*)	(*)	(*)	-------	(*)	*Classes must be established and regular compulsory age applies.

[1] The above data have been obtained from U. S. Bureau of Education, Bulletin, 1928, No. 20, "Laws Relating to Compulsory Education."

TABLE 4.—*Comparison of compulsory attendance ages of normal and atypical children*—Continued

States	Attendance ages						Explanatory notes
	Normal	Atypical					
		Blind	Crippled	Deaf	Mute	Feeble-minded	
1	2	3	4	5	6	7	
NORTH ATLANTIC DIVISION—con.							
New York	7–16▲	(*)	(*)	(*)	(*)	(*)	*Special classes must be established if there are 10 or more children of the type specified. ▲Until 18 where continuation schools are provided.
Pennsylvania	8–16	6–16*	6–16*	6–16*	6–16*	8–16*	*The local board must provide classes for physically or mentally handicapped children.
Rhode Island	7–16			7–18	7–18		
NORTH CENTRAL DIVISION							
Illinois	7–16*	8–18	7–16	8–18		(▲)	*Until 18 where continuation schools are established. ▲May be committed to State institutions.
Indiana	7–16	7–18	(*)	7–18			*State aid required under certain conditions.
Iowa	7–16	7–19		7–19			
Kansas	7–16	7–21*		7–21*	7–21*		*Age inclusive.
Michigan	7–16	7–19	(*)	7–18			*State and local districts must provide for their education under certain conditions.
Minnesota	8–16		(*)	8–20	8–20	(▲)	*State aid required under certain conditions. ▲All "educable children" must be enumerated.
Missouri	7–16	7–14*	7–14*	7–14*		7–14*	*All "educable children" must be enumerated.
Nebraska	7–16	7–20		7–20			
Ohio	6–18	6–18	6–18	6–18	6–18	6–18	
Wisconsin	7–16	6–18		6–18			
SOUTH ATLANTIC DIVISION							
Delaware	7–17	7–18					
Georgia	8–14					(*)	*May be committed to State institutions.
Maryland	7–17	6–18		6–18			
Virginia	7–15	(*)		(*)			*The quinquennial census must include a separate census of blind and deaf persons between 7 and 21, which shall be reported to superintendent of school for the deaf and blind.
SOUTH CENTRAL DIVISION							
Alabama	8–16						
Kentucky	7–16			7–16*			*Age inclusive.
Louisiana	7–14	(*)	(*)	(*)	(*)	(*) (▲)	*Attendance compulsory for "mentally, morally, or physically deficient children in special classes." ▲May be committed to State institutions.
Tennessee	7–16	(*)					*Pupils in State institute for the blind "shall be taught such branches of learning as they can acquire."
Texas	8–14	6–14		7–21			
WESTERN DIVISION							
California	8–16	6–16*	6–16*	6–16*	(▲)		*Age 6 to 16 implied. ▲"Any minor who can profit by such (regular) instruction."
Colorado	8–16	6–17		6–17			
Oregon	9–15	8–18	6–18	8–18	8–18	(*)	*May be committed to State institutions.
Utah	8–18	8–18		8–18	8–18		
Washington	8–16*	6–21		6–21		6–21	*Until 18 in part-time schools.

In the North Atlantic Division, Connecticut requires the blind, crippled, deaf, and mute to start their schooling three years earlier than the normal pupils, and Pennsylvania requires attendance two years earlier than the normal, except in the case of the feeble-minded, who start at the regular age. Massachusetts, New Jersey, and New York require attendance in special classes for the types specified within the same age range as for normal children. Rhode Island does not require the blind and crippled to attend school—at least no compulsory ages have been established; but the deaf and mute must remain in school two years longer than the normal. Both Connecticut and Pennsylvania specify a permissive maximum for atypical pupils less than that for normal.[12]

Compulsory ages are specified for blind children in all States of the North Central Division except Minnesota. In seven of the nine States of this division this compulsory age exceeds the normal maximum by two or more years. Kansas requires these children to attend school until they are 22. Missouri, peculiarly, specifies a maximum of 14 years, 2 years less than the normal, and Ohio 18 years, which is the same as the normal age. The minimum compulsory ages for blind atypical children are in no case less than those of the normal group. Concerning permissive ages for the blind, Michigan and Ohio both permit attendance at 3 years. This is several years younger than for the normal children, and is undoubtedly a laudable enactment.

Mandatory ages for the crippled, in this division, are given definitely for 3 of the 10 States. Missouri, as for the blind, indicates a maximum age of 14. The other two States have their atypical and normal maxima the same. Age limits are stipulated for the deaf in all of the 10 States of this division. In all but two cases they are the same as specified for the blind. Minnesota has a 20-year maximum for the deaf, and none for the blind. Michigan has an 18-year maximum for the deaf, whereas that for the blind is 19. Minimum ages are specified in the case of five States of the North Central Division for the permissive attendance of deaf children. This minimum is 3 years below the normal in Ohio and Illinois, 2 years below in Michigan, and 1 year below in Minnesota; Nebraska has the same minimum as for the normal child.

The Southern Divisions have stipulated few compulsory ages for exceptional children. In general, this section has no requirement out of the ordinary except the following: Delaware has a maximum of 18 years for the blind in place of 17 which is for the normal child; Maryland specifies 18 for the blind and deaf, whereas the normal maximum for this State is 17; Kentucky, 17 for the deaf instead of 16; Texas, 21 for the deaf in place of 14. The minimum compulsory

[12] See Table 5.

ages are: One year younger for the blind and deaf in Maryland; two years younger for the blind, and one for the deaf in Texas.

TABLE 5.—*Comparison of permissive attendance ages of normal and atypical children* [1]

NOTE.—Where no special permissive age is given for atypical groups, it is implied that it is the same as for normal groups.

States	Attendance ages								
	Normal	Atypical							
		Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Mentally subnormal	Gifted
1	2	3	4	5	6	7	8	9	10
NORTH ATLANTIC DIVISION									
Connecticut	5–	4–16	4–16	4–16	4–16	4–16		4–16	
Massachusetts	[2]							[3]	
New Jersey	5–20							[3]	
New York	5–21							[3]	
Pennsylvania	6–21	6–16	6–16	6–16	6–16	6–16	6–16	8–16	6–16
Rhode Island	[4]							[3]	
NORTH CENTRAL DIVISION									
Illinois	6–21		5–21	3–21				[3]	
Indiana	6–21								
Iowa	5–21			–16					
Kansas	6–21							[3]	
Michigan	5–20	3–20	6–20	3–20					
Minnesota	[5] 5–21			4–21					
Missouri	6–20								
Nebraska	5–21			5–					
Ohio	6–21	3–	5–	3–					
Wisconsin	4–20								
SOUTH ATLANTIC DIVISION									
Delaware	6–21								
Georgia	6–18								
Maryland	6–20								
Virginia	6–20								
SOUTH CENTRAL DIVISION									
Alabama	6–							()	
Kentucky	6–18								
Louisiana	6–18								
Tennessee	6–								
Texas	[6] 7–21								
WESTERN DIVISION									
California	[7] 6–21								
Colorado	6–21								
Oregon	6–21	6–21	6–21	6–21	6–21	6–21	6–18	6–18	6–18
Utah	6–18						8–18		
Washington	6–21								

[1] The data for normal permissive ages have been obtained from U. S. Bureau of Education Bulletin, 1928, No. 20, Laws Relating to Compulsory Education. The data for atypical permissive ages have been obtained directly from the statutes. (See end of Part I.)
[2] Any age.
[3] 3 years or more retarded mentally.
[4] None stated.
[5] School boards may exclude children under 6.
[6] School trustees may admit children under or over school age.
[7] Any minor who requires special instruction.

In the Western Division, Washington is noteworthy in specifying a compulsory age range of 6 to 21 years for the blind, deaf, and feeble-minded. Oregon permits all physical defectives to attend

special classes or institutions between the ages of 6 and 21, and other atypical groups from 6 to 18. California has a minimum compulsory age of 6 for the blind, crippled, and deaf, which is two years under the normal minimum for these three groups; Colorado's compulsory minimum is two years less, and maximum one year more for the blind and deaf; Oregon has minima of one year less for the blind, deaf, and mute and two years for the crippled; her maximum for all groups is 18 instead of 15, which is the compulsory age for normal children of that State.

Having surveyed the attendance ages for each section of the country in detail, it will also be significant to consider the average age range for each group of atypical children in each section and taking the country as a whole. Presumably, the greater number of years the handicapped child is required or permitted to attend school the better training he can receive before he is thrown upon his own resources. Whether this is accomplished best by lowering the minimum or by extending the maximum is debatable. Some States have stipulated one or the other, and a number have done both. The States which have lowered minimum or extended maximum compulsory ages are: Connecticut, Pennsylvania, Rhode Island, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, Delaware, Kentucky, Texas, and California—14 out of the 30 States. Five States have both lowered the minimum and extended the maximum. They are: Wisconsin, Maryland, Colorado, Washington, and Oregon.

The average range of compulsory attendance ages for normal pupils in the 30 States is 8.6 years. That for the blind is 10.9 years; crippled, 9.9 years; deaf, 11.1 years. Averages for the other types are not given because of the few cases involved. The average compulsory attendance range for the blind exceeds the average normal pupil range by 2.3 years; the excess for the crippled is 1.3 years; for the deaf, 2.5 years.

It is likewise significant to compare the average range of ages in one section of the country with those of another. When this is done it is found that the average range for the blind is 9.8 years in the North Atlantic Division, 11.6 years in the North Central Division, and 11.2 years in the Western Division. Corresponding ranges for the deaf are 10, 11.5, and 11.2 years, respectively. The Southern Divisions are omitted in this comparison because of the few cases involved. These data indicate that the North Central States have provided for a longer average attendance period than the North Atlantic by 1.8 years in the case of the blind and 1.5 years for the deaf. The Western States exceed the North Atlantic by 1.4 years for the blind and 1.2 years for the deaf.

Summarizing the preceding analysis, we see that 14 of the 30 States have lowered minimum or extended maximum compulsory ages for

one or more types of atypical children. Five States have done both. The average range of compulsory ages for the blind, crippled, and deaf exceeds the average range for normal children in the three sections for which this has been computed. The excess is greatest in the North Central Division, less in the Western and least in the North Atlantic Division. The average range in each section is most for the deaf, followed by the blind and crippled.

Number required in a class.—Thirteen States, according to Table 6, have made some requirement as to the minimum enrollment required in certain atypical classes; two of them have also set a maximum for some classes. The minimum is usually set at 10, although some States have departed somewhat from this standard number. New Jersey has established a minimum of five for blind classes and eight for crippled. In order to avoid too many pupils in classes for the crippled, this State prescribes that the maximum shall be "no more than approved by the Commissioner of Education." Michigan and Minnesota have gone further than other States in permitting classes to be formed for the blind, crippled, and deaf with an enrollment of only five. Missouri has stipulated a minimum of 10 for the feeble-minded, but 20 for the dull. New York and New Jersey are the only States specifying maximum enrollments. The former stipulates a maximum of 15 for the mentally subnormal, the latter 10 for the blind, 10 for the deaf, and 15 for the subnormal.

TABLE 6.—*Prescribed enrollment in atypical classes* [1]

State	Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Mentally subnormal	Gifted
NORTH ATLANTIC DIVISION								
Connecticut	[2] 10	[2] 10	[2] 10–	[2] 10	[2] 10		[2] 10–	
Massachusetts			10–				10–	
New Jersey	5–10	[3] 8–	10–10				10–15	
New York	10–	10–	10–	10–			10–15	
Pennsylvania	10–	10–	10–	10–	10–	10–	10–	10–
NORTH CENTRAL DIVISION								
Indiana	10–	10–	10–	10–	10–			
Kansas							15–	
Michigan	5–	5–	5–					
Minnesota	5–	5–	5–					
Missouri	10–	1–	10–		[4] 50		{F.M.10– {Dull.20–	
Nebraska			5–					
Ohio	([5])	[5] 8–	([5])					
SOUTHERN DIVISION								
Alabama							10–	

[1] The data for this table have been obtained directly from the statutes of the States concerned. (See end of Part I.) Single numbers in table indicate minimum enrollment permitted in a class. Two numbers indicate minimum and maximum enrollment.
[2] Minimum for mandatory classes; no minimum for permissive classes.
[3] Maximum to be no more than approved by commissioner of education.
[4] A speech teacher is employed when there are 50 or more speech defectives.
[5] Blind, crippled, and deaf must have average attendance of not less than 3.

It seems evident that the authorities should endeavor to determine the optimum enrollment for each atypical group; then a proper minimum and maximum could be established. The fact that an enrollment of 10 is prescribed in most of the legislation seems to indicate that this number has merely been copied into the various enactments without much thought as to its adequacy, or perhaps that it has been found to be a satisfactory minimum.

C. State Aid for Atypical Classes

1. *Provisions in State laws.*—Financial assistance for education in general in local districts is provided by each State, though the proportionate amount varies greatly in the different States. This discussion, however, is limited to special aid prescribed definitely in the statutes for the public-school education of atypical children.

One would suppose that the State would always provide special assistance when classes have been mandatory. This is not so necessary with the larger cities, but the smaller districts frequently find it a real hardship to establish these classes. Reference to Table 3 shows that 35 of the 100 enactments are mandatory. Of these 35 required types, special aid is given by the State in 17 instances, or 48 per cent. There are 65 cases of permissive legislation; State assistance is provided in 40 instances, or 61 per cent. Thus aid is furnished by the State relatively more often for permissive than for mandatory classes. It will be noted that most aid is provided in the North Central Division.

Has one atypical group been given funds more often than another in the distribution of State aid? An answer to this question would seemingly indicate the importance ascribed to each type. The data of Table 7 point out that aid is given for the blind in 12 cases out of 17 enactments, or 70 per cent. The corresponding percentages for the other groups are: Crippled, 75 per cent; deaf, 77 per cent; open air, 36 per cent; speech, 50 per cent; disciplinary, 30 per cent; mentally subnormal, 40 per cent; and gifted, 50 per cent. The blind, crippled, and deaf have received aid in most instances, whereas inadequate legal provision has been made for the support of the other groups.

Pennsylvania ranks high in progressive legislation for atypical children in that all classes are mandatory, and State aid is given in each case.[13] Indiana gives aid for the five types of physical defectives specified in her laws. Michigan, Minnesota, and Missouri likewise assist for all of the classes which their laws permit or require to be established. Iowa and Washington mention one and two types, respectively, in their laws and supply aid for their support. No special aid is provided in the following eight States, all of which,

[13] See Tables 3 and 7.

however, have some legislation permitting or requiring atypical classes: Connecticut, Kansas, Alabama, Kentucky, Louisiana, Tennessee, Oregon, and Utah. Six of these States have not enacted any "atypical" legislation. They are: Rhode Island, Delaware, Georgia, Virginia,[14] Texas, and Colorado. The three States of Connecticut, Louisiana, and Oregon have each enacted permissive or mandatory legislation comprising five or more atypical types, and yet no special aid is provided the local districts. Connecticut endeavored to enact a law during her recent legislative session which would have provided support for special classes, but it failed to pass.

[14] Since this manuscript has been submitted Virginia has enacted legislation relative to public-school classes for the blind.—EDITOR.

TABLE 7.—*Provision in State laws of special State aid for public-school classes for atypical children*

State	Amount of special State aid								Explanatory notes
	Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Mentally subnormal	Gifted	
1	2	3	4	5	6	7	8	9	
NORTH ATLANTIC DIVISION									
Massachusetts	$500–C*		(▲)						* Sight saving only. ▲ State department of education will pay total cost for classes in 6 towns selected by the department.
New Jersey		$500–T*							* County apportions $500 per teacher and State will pay one-half of the excess cost above that for normal children.
New York	(*)	(*)	(*)	(*)			(*)		* One-half of teacher's salary but not over $1,000. State equalization plan, however, resulted in reimbursement of $1,400 per teacher in 1929.[1]
Pennsylvania	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	* In first-class districts (Philadelphia and Pittsburgh) 25 per cent of minimum salary of each full-time teacher, supervisor, or principal; in other districts, 30 per cent. These amounts are in addition to the regular reimbursement.
NORTH CENTRAL DIVISION									
Illinois	$250–P	$300–P	$110–P			$190–P			State will pay up to amounts specified for excess cost above that for normal children, but only for elementary education.
Indiana	¾ excess.	¾ excess.	¾ excess.	¾ excess.	¾ excess.				State will pay three-quarters of excess cost above that for normal children.
Iowa			$20–P						Per month. Only for pupils under 16 years of age.
Michigan	$200 P	$200–P	$200–P						State will pay up to $200 for excess cost above that for normal children, but only for elementary education.
Minnesota	$300–P	$250–P	$250–P*		$1, 500–T		$100–P		* State will pay $250 if pupil attends school in his own district, but $400 if he attends school in another district.
Missouri	$750–T*	$750–T*	$750–T*		$750–T*		$300–T▲ $750–T		*But not over two-thirds of salary. ▲ $300 per teacher of the dull; $750, but not over two-thirds of salary per teacher of the feeble-minded.
Nebraska			$150 to $300–P*						All of the aid specified is for elementary education only. * Class of 5 to 7 pupils, $300 per year per pupil; Class of 8 to 11 pupils, $250 per year per pupil; Class of 12 to 16 pupils, $200 per year per pupil. Class of 17 or more pupils, $150 per year per pupil.

Ohio	$375–P	$300–P	$300–P						State will pay up to amounts specified for excess cost above that for normal children: also up to $250 additional if pupil goes away. The State department of education has recently ruled that it will not honor amounts over $300 for sight-saving classes, but will approve up to $375 for the totally blind.
Wisconsin	$250–P	$300–P	$250–P				$100–P	$100–P	State will pay up to amounts specified for excess cost per pupil over $70. If pupil attends school in another district, the maxima are increased to $400 for the blind, deaf, mentally subnormal, and gifted, and to $450 for the crippled. Transportation up to $150 is also provided.
SOUTH ATLANTIC DIVISION									
Maryland	$2,000–C	$2,000–C	$2,000–C	$2,000–C					* $2,000 per class of "physically handicapped" pupils.
SOUTH CENTRAL DIVISION									
(None of these States offers special State aid)									
WESTERN DIVISION									
California	$100–P	$100–P	$100–P		$100–P				State will pay up to specified amount for one-half of excess cost above that for a normal pupil. County pays same amount. Aid applies to high as well as elementary classes.
Washington						(*)	(▲)		* State apportionment on basis of three times the total number of days actual attendance the previous year. (No aid allowed for excess over a 183-day term.) ▲ State apportionment on basis of five times the total number of days of actual attendance the previous year. (No aid for excess over a 183-day term.)
Total enactments	12	12	14	4	5	3	6	2	

[1] The New York Legislature of 1930 changed this method of apportionment to the regular per teacher basis, each special class counting as one teacher unit in the general State apportionment of funds.—EDITOR.

There are a number of bases on which the support is administered—per pupil, per teacher, per class, or a combination of these factors. The per pupil basis is most generally used. The combination method is applied in New York, Pennsylvania, and Washington. In the per pupil system of distribution the State specifies that it will pay the excess cost (up to a prescribed maximum) above that of the average cost for a normal child for the maintenance and instruction of the atypical pupil for a school year of a certain length, or proportionately less for a shorter period. At times the statute definitely states whether the legislation is for elementary or secondary education, or both. The law of Michigan is quoted as an example of the per pupil type:

> The total amount per pupil paid to any one school district for the purpose herein provided shall not exceed the difference between the average per capita cost of instruction and equipment for the other children in the first eight grades of said school district and the average per capita cost required to pay teachers' wages and the cost of the necessary special school equipment to educate the children enrolled in the classes established for those children who may be included within the provisions of this act. In no case shall the amount paid exceed two hundred dollars for each child instructed in said school district during the school year, and a part of such sum proportionate to the time of instruction of any pupil so instructed less than the number of months prescribed for the school district for the year. The board of education of any school district that does not maintain a class for the children named in this act may pay the tuition of any such children to a school maintaining such schools or classes.[15]

In most of this legislation, especially that relating to crippled children, provision is made for State reimbursement for home teaching, transportation, tuition in another district, etc., but these special features will not be analyzed in this study.

Which States have made the most adequate financial provision for atypical children? Reference to the data in the column headed "Blind" in Table 7 indicates that the highest per pupil amount is $375,[16] which is given by Ohio; Minnesota provides $300; Illinois and Wisconsin each $250; Michigan provides $200; and California $100, with an equal amount to be given by the county. Inasmuch as the per teacher or per class bases would have to be at least $1,000 to compare with the preceding figures, it can readily be seen that $500 per class in Massachusetts and $750 per teacher in Missouri represent decidedly lower reimbursement. The recent Maryland provision of $2,000 per class is the most adequate of those which have hitherto been enacted on this basis.

The per pupil aid for crippled is higher than for the blind in two instances, and lower in two others—all in the North Central Division. In two other cases it is the same. This would indicate that

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[15] Michigan, P. A., 1923, Act 122, sec. 4.

[16] The director of the division of special classes in a letter states that his department has recently ruled that no more than $300 will be paid per pupil in sight-saving classes.

there seems to be no set opinion as to whether the crippled require more, the same, or less than the blind. Three States—Illinois, Ohio, and Wisconsin—specify $300; Minnesota, $250; Michigan, $200; and California, $100.

The aid for deaf classes (per pupil basis) is the same or lower in every case than that for the blind or crippled. The highest amount is $300 in the case of Ohio and Nebraska;[17] Wisconsin and Minnesota specify $250; Michigan, $200; California, $100; Illinois, $110; Massachusetts pays the total cost in six cities. Nebraska is the only State which has provided a scale based on enrollment in a class. This furnishes an incentive for the establishment of small classes for the deaf in that State. Amounts specified for other atypical types are scattering and require no special comment.

Where a State has provided the same amount for each type, it seems probable that little recognition has been given to the relative cost of educating the different groups. This is true in New York, Pennsylvania, Indiana, Michigan, Missouri, and California. The Indiana enactment, however, may be said to be the most flexible, as the State will pay three-fourths of the excess cost, with no maximum specified. Under careful State regulation, this act should prove a decided stimulus to special class development.

2. *Actual amount provided during 1927–28.*—In order to have some indication of the total support accorded special education in the States, the superintendents of public instruction were asked to specify the total sum given to the school districts for all education during 1927–28 and the amount given for special education alone. Comparable figures were received from five States. These are given in Table 8. While no valid conclusions may be drawn from the five States cited, yet the figures give us some indication of the tendency, inasmuch as the three divisions of the country which give State aid for special education are represented.

Pennsylvania seems to be spending too little proportionately for this education, if the expenditures in other States may serve as a criterion. Minnesota, on the other hand, is almost as far above the average percentage expenditure of the five States as Pennsylvania is below this point.

D. Trend of Legislation Concerning Atypical Children

1. Past Tendencies

The trend of "atypical" legislation may be seen by reference to Tables 9 and 10. The first tabulation gives the first and last years that enactments for the various exceptional groups have been passed in the 30 States; the second is a distribution by years of the first

[17] Nebraska has a sliding scale based on enrollment, with $300 as a maximum. See notes to Table 7.

legislation only. Table 10 shows that only 14 acts of the 100 that have been passed to date were enacted prior to 1914. At that time there were on the statutes three laws referring to the blind, two to the crippled, two to the deaf, none for speech defectives, five relating to disciplinary cases, one for the mentally subnormal, and none for the gifted.

TABLE 8.—*Amounts given by States to local districts for all educational purposes, and for education of atypical children during 1927–28* [1]

State	Year	Total amount given to local district	Total amount for education of atypical children	Percentage that column 4 is of column 3
1	2	3	4	5
Minnesota	1927–28	$9, 893, 969. 00	$383, 401. 26	3. 9
Missouri	1927–28	4, 468, 393. 40	109, 027. 48	2. 4
Pennsylvania	1927–28	[2] 12, 785, 000. 00	176, 237. 37	1. 4
Washington	1927–28	8, 212, 476. 00	181, 768. 00	2. 2
Wisconsin	1927–28	5, 377, 951. 09	198, 233. 38	3. 7
Average				2. 7

[1] The data of this table have been obtained directly from officials of State departments of education.
[2] Total for elementary education only.

TABLE 9.—*Dates of enactment of State laws applying to public education of atypical children* [1]

State	Blind		Crippled		Deaf		Open air		Speech		Disciplinary		Mentally subnormal		Gifted	
	Initial	Present	Initial	Present	Initial	Present	Initial	Present	Initial	Present	Initial	Present	Initial	Present	Initial	Present
NORTH ATLANTIC DIVISION																
Connecticut	1921	1921	1921	1921	1921	1921	1921	1921	1921	1921			1921	1921		
Massachusetts	1919	1925			1923	1923							1919	1922		
New Jersey	1918	1928	1918	1928	1918	1928					1913	1913	1911	1928		
New York	1917	1927	1917	1927	1917	1927	1917	1927			1928	1928	1917	1923		
Pennsylvania	1919	1925	1919	1925	1919	1925	1919	1925	1919	1925	1919	1925	1919	1925	1919	1925
NORTH CENTRAL DIVISION																
Illinois	1909	1929	1909	1925	1909	1929					1909	1923	1909	1917		
Indiana	1927	1927	1927	1927	1927	1927	1927	1927	1927	1927						
Iowa					1917	1927										
Kansas																
Michigan	1905	1927	1923	1927	1905	1927							1927	1927		
Minnesota	1915	1923	1921	1923	1915	1923			1915	1921			1915	1921		
Missouri	1919	1921	1919	1921	1919	1921			1919	1921			1919	1921		
Nebraska					1921	1921					1901	1913				
Ohio	1911	1925	1913	1925	1896	1925	1923	1923								
Wisconsin	1915	1927	1915	1927	1915	1927	1915	1927	1915	1927			1915	1927	1915	1927
SOUTH ATLANTIC DIVISION																
Maryland	1914	1929	1914	1929	1914	1929	1914	1929	1914	1929						
SOUTH CENTRAL DIVISION																
Alabama													1927	1927		
Kentucky	1924	1924														
Louisiana	1920	1922	1920	1922	1920	1922	1920	1922	1920	1922	1920	1922	1920	1922		
Tennessee							1921	1921								
WESTERN DIVISION																
California	1921	1927	1921	1927	1921	1927	1921	1927	1927	1927	1927	1927	1921	1921	1927	1927
Oregon	1923	1929	1923	1929	1923	1929	1923	1929	1923	1929	1917	1923	1923	1923	1923	1923
Utah											1905	1921				
Washington											1903	1903	1923	1923		
Total	17	17	15	15	18	18	11	11	10	10	10	10	15	15	4	4

[1] See end of Part I for location in statutes of most recent laws cited below. Wyoming is omitted from this list, since it does not come within the scope of this study. (See Introduction.) Virginia enacted legislation relative to the blind in 1930.

Read table as follows: Connecticut passed its first law relating to public-school classes for the blind, crippled, deaf, open-air types, speech defectives, and mentally subnormal in 1921. This law has not been amended by any later enactment.

TABLE 10.—*Distribution, by years, of initial enactments relative to public education of atypical children*

Year	Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Mentally subnormal	Gifted	Total
1896			[1] 1						1
1901						[2] 1			1
1902									0
1903						1			1
1904									0
1905	[3] 1		1			1			3
1906									0
1907									0
1908									0
1909	1	[4] 1	1			1	[4] 1		5
1910									0
1911	1						1		2
1912									0
1913		1		[5]		1			2
1914	1	1	1	1	[5] 1				5
1915	2	1	2	1	2		2	[6] 1	11
1916									0
1917	1	1	2	1		1	1		7
1918	1	1	1						3
1919	3	2	2	1	2	1	3	1	15
1920	1	1	1	1	1	1	1		7
1921	2	3	3	3	1		2		14
1922									0
1923	1	2	2	2	1		2	1	11
1924	1								1
1925									0
1926									0
1927	1	1	1	1	2	1	2	1	10
1928						1			1
1929									0
Total	17	15	18	11	10	10	15	4	100

Read table as follows: During 1896 one State only (Ohio) passed its initial legislation relative to public school classes for the deaf. In 1919 there were 15 initial enactments; 3 referred to the blind, 2 to crippled, etc.

[1] Ohio.
[2] Nebraska.
[3] Michigan.
[4] Illinois.
[5] Maryland.
[6] Wisconsin.

During the war years, from 1914 to 1918, a sudden increase in enactments is noted. This may have been due to an awakened realization that a healthy, mentally competent citizenry was a national asset. The next important legislative year,[18] 1917, witnessed a decline in enactments, which can be explained by the entry of the United States into the war. The year 1919, after the war had terminated, again showed a large number of acts, more than those passed during any previous or subsequent year. In the years 1921, 1923, and 1927, similarly, considerable "atypical" legislation was passed. As representative of the interest in this field, it should be noted that as recently as 1927 initial acts were passed comprising all of the special types.

The trend in the different sections of the United States may be noted in Table 9. In the North Atlantic Division, Connecticut passed all of her "atypical" laws in 1921; New York goes back in most of this legislation to 1917; Pennsylvania to 1919. Furthermore, the States of this division, with the exception of Connecticut, have

[18] The legislatures of most of the States meet biennially.

made amendments to their original "atypical" acts in quite recent years. However, no legislation in this section antedates the year 1917 except provision for disciplinary classes in New Jersey, enacted in 1913.

The North Central Division had legislation for each type prior to the start of the World War. An act concerning the blind was passed in Michigan in 1905; concerning the crippled, by Illinois, in 1909;

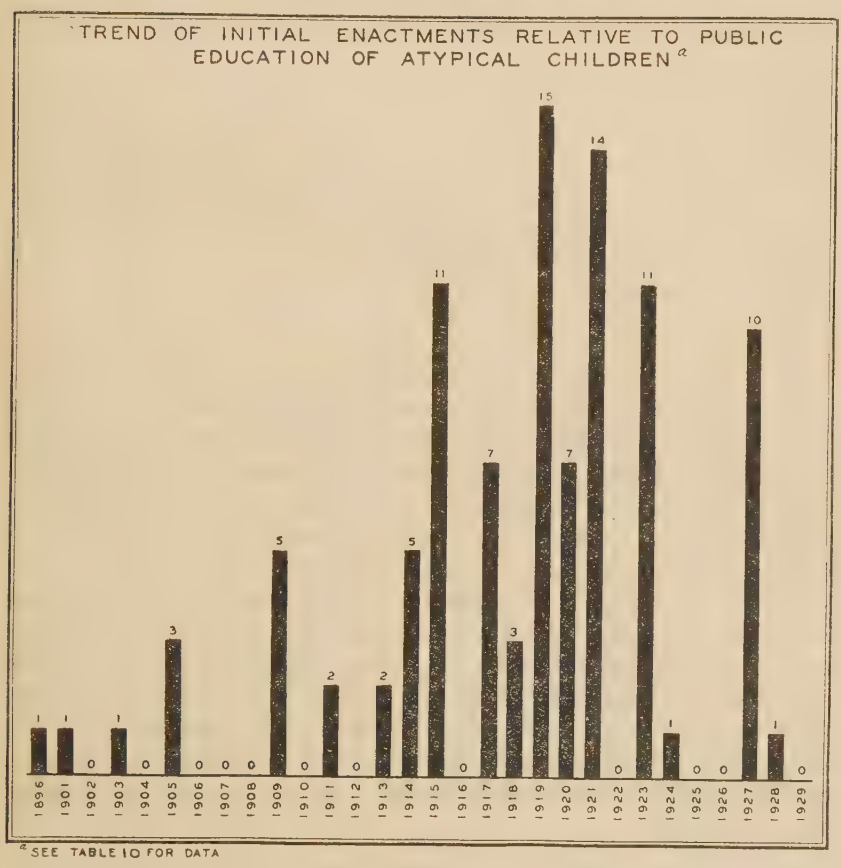

FIGURE 1

deaf, by Ohio, in 1896; open air, by Wisconsin, in 1915; disciplinary, by Nebraska, in 1901; mentally subnormal by Illinois, in 1909; gifted, by Wisconsin, in 1915. Furthermore, this division has also enacted very recent legislation for all types except the disciplinary, for which the last law was passed in 1923. Missouri and Nebraska enacted their last laws relating to exceptional children in 1921; all of the other States, on the other hand, have had more recent legislation.

When the Southern Divisions are examined, it is found that few acts have been passed and that none are recent except that of Mary-

land, in 1929, and that of Alabama embracing the mentally subnormal, and passed in 1927. The most recent act, in Louisiana, which comprises most atypical types, was passed in 1922.

In the Western Division, California and Oregon have enacted recently for practically all types. In 1921 California passed her first legislation, which comprised most of the groups. Oregon's enactments begin in 1923 for all types except the disciplinary, which dates from 1917. Utah and Washington passed laws embracing disciplinary cases in 1905 and 1903, respectively, but have had no recent legislation.

Considering the development of legislation for each atypical type, it can be stated from Table 10 that the most uniform growth has taken place with the "disciplinary" enactments: The blind and deaf also received early attention, but most acts bearing on these types have been recent. No generalizations may be made concerning the other types except the observation that their growth has occurred largely since the war.

2. Present Need

(*a*) *Desirable additional or new legislation: Opinions of State administrators.*—In a questionnaire sent to the State superintendent of public instruction or director of special education of each of 30 States the question was asked, "What new or additional legislation covering special education in the public schools do you see a need for at present in your State?" Replies were received from 16 of the States. These should be compared with Tables 3 and 7, which summarize existing "atypical" legislation. Four States—Massachusetts, Pennsylvania, Iowa, and Georgia—answered "none." These replies were signed in the first three cases, respectively, by the supervisor of special schools and classes, director of special education, and inspector of consolidated schools; that of Georgia was unsigned.[19]

The other 12 States responding indicated in general the need for new legislation. Their replies, grouped according to sections of the country, follow.

North Atlantic Division.—Connecticut: "There should be vocational supervision of feeble-minded children in industry. No additional legislation is needed at present." (No signature.)

New Jersey: "Legislative survey commission to make a report the present year." (No signature.)

North Central Division.—Indiana: "We have not had sufficient time to determine needed adjustments in our 1927 law." (No signature.)

Missouri: "For gifted children especially." (State superintendent of public schools.)

[19] A number of the questionnaires were not signed in the space provided. They all came, however, from the offices of the State superintendent of public instruction or the State director of special education.

Ohio: "Subsidy, regulations, and supervision for mentally handicapped. Thorough testing system and a great extension of service of bureau of juvenile research." (Director of division of special classes.)

Wisconsin: "Increased budget for mental defectives (and) defective vision." (Clinical psychologist, department of public instruction.)

Southern Division.—Virginia: "Fortunately for us * * * the State board of education by general regulation can supply needed direction." (Superintendent of public instruction.)

Tennessee: "Not a pressing issue in this State." (No signature.)

Western Division.—California: "We have no State aid for mentally retarded or gifted children. Our law applies to physically handicapped only." (Chief, division of special education.)

Oregon: "Practically all of the children needing special education are provided for under the existing laws of this State." (Superintendent of public instruction.)

Utah: "More adequate finances. State trade school." (State superintendent of public instruction.)

Washington: "Definite check on subnormals." (No signature.)

Three of the preceding States—Connecticut, Ohio, and Washington—desire more supervision and regulation of the mentally subnormal; Connecticut emphasizes their control in industry; Ohio speaks of the need for considerable extension of "juvenile research"; Missouri sees the necessity of legislation for the gifted.

Ohio and California desire a State subsidy for mentally subnormal children, and Wisconsin wishes an increased budget for this type. California also mentions State aid for the gifted, as no subsidy is granted in that State to either of the mentally atypical groups.

Indiana and New Jersey are awaiting the reports of observers on the existing laws; Tennessee, Virginia, and Oregon see no especial need for additional enactments at present.

(*b*) *Legislation for the gifted: Opinions of State administrators.*—Inasmuch as fewer legal enactments concerning the gifted have been passed by the States than for any other group of atypical children, it was thought desirable to obtain special information on this point from the State superintendents of public instruction. Accordingly, they were asked the following question in an inquiry which was submitted to them:

Many educators believe that the gifted child should be provided with just as much opportunity and special facilities for his training as is now provided in most places for those of low mental endowment. What is your opinion concerning this question?

Fifteen of the thirty States made some reply. In general, those answering this question were in favor of some extra provision for the gifted. The replies, grouped according to sections of the country, were:

North Atlantic Division.—Connecticut: "I believe they should be so provided for." (No signature.)

Massachusetts: "Minimum standard for all. When all specials have such opportunity, then extend opportunity of gifted." (Supervisor of special schools and classes.)

Pennsylvania: "The gifted child should have adequate opportunity for maximal development of ability." (Director of special education.)

North Central Division.—Indiana: "Yes, to limited degree." (No signature.)

Iowa: "Gifted children should be encouraged." (Inspector of consolidated schools.)

Michigan: "He certainly should be given educational opportunities which will challenge and develop all his ability." (State director of division of special education.)

Missouri: "I think gifted children should be provided special facilities for their training." (State superintendent of public schools.)

Ohio: "Should have special facilities." (Director of division of special classes.)

South Atlantic Division—Delaware: "The State should furnish opportunity and direction for specially gifted children, but not to the extent required by mentally deficient ones, as the need on their part is not so great." (State superintendent of public instruction.)

Georgia: "As much as needed." (No signature.)

South Central Division—Tennessee: "Correct." (No signature.)

Western Division—California: "Gifted children need just as much attention, if not more, than the retarded child." (Chief, division of public instruction.)

Oregon: "The department is in favor of special facilities for the training of the gifted child." (Superintendent of public instruction.)

Utah: "Undoubtedly the gifted children, if properly trained, would make the largest contribution to social progress. To neglect the proper guidance of gifted children is probably more serious than to neglect those of low mental endowments. On the other hand, gifted children are better able to work out their own problems without aid. We therefore favor the adaptation of educational opportunity to meet the special needs of different types of students, whether on the lower or the upper level." (Superintendent of public instruction.)

Washington: "Yes, if not too expensive." (No signature.)

It should be observed that of the four States having legislation concerning the gifted, Pennsylvania, California, and Oregon express themselves as being definitely in favor of special provisions; Wisconsin failed to answer this question. Other States expressing similar approval were Michigan, Missouri, Ohio, Georgia, Tennessee, Utah, and Washington. Massachusetts believes that the gifted should be taken care of after all others have attained a minimum standard; Indiana, Iowa, and Delaware believe in a limited recognition. The preceding statements from State superintendents of public instruction point to the need of some tangible recognition of this neglected field of special education.

State educational authoriteis were further asked whether they believed a State should give special aid for gifted classes if authority for their establishment had been granted. Fifteen of the thirty States replied to this question. Nine replied "yes," five "no," and Michigan considered it to be "debatable." Grouping the States according to their location, the replies and the officials signing the inquiries were as follows:

North Atlantic Division—Connecticut: "Yes." (No signature.)
Massachusetts: "No." (Supervisor of special schools and classes.)
Pennsylvania: "Yes." (Director of special education.)
North Central Division—Indiana: "Yes." (No signature.)
Iowa: "No." (Inspector of consolidated schools.)
Michigan: "It is debatable. I believe the local city schools should do this." (State director, division of special education.)
Missouri: "Yes." (State superintendent of public schools.)
Ohio: "Yes." (Director of division of special classes.)
Wisconsin: "Yes." (Clinical psychologist, department of public instruction.)
Southern States—Delaware: "No." (State superintendent of public instruction.)
Georgia: "I do not agree that it is the business of the State to provide all funds for schools. The local unit should provide for special activities while State provides for regular. Let State lead by education and not by stimulation." (No signature.)
Tennessee: "Yes." (No signature.)
Western Division—California: "Yes." (Chief, division of special education.)
Oregon: "It should." (Superintendent of public instruction.)
Washington: "No." (No signature.)

It should be noted that two of the five States answering the question in the negative were Delaware and Georgia, neither of which has any law dealing with public-school atypical classes. The other three were Massachusetts, Iowa, and Washington. On the other hand, Tennessee, which replied in the affirmative, provides only for mandatory classes for tuberculous children. The remaining eight States which believed that the gifted should receive special aid were: Connecticut, Pennsylvania, Indiana, Missouri, Ohio, Wisconsin, California, and Oregon. California has probably more gifted classes than any other State, but has not provided any special aid for these groups. Pennsylvania has made the establishment of classes for the gifted and special aid for their maintenance mandatory, yet none have been established in Philadelphia or Pittsburgh, the two largest cities of the State.

In view of the prevailing opinion previously noted that classes for the gifted should be provided, and in view of the replies just cited relative to State aid for these classes, it seems that the time is opportune for educational authorities in this country to give serious consideration to the proper education of children of exceptional ability.

E. Summary and Conclusions

Summary.—1. In several States the laws definitely permit classes for atypical children in the high school; in California, State aid is explicitly provided for such classes.

2. Fifteen of thirty States[20] replied to a question concerning the desirability of special education for gifted children. Ten were

[20] 30 States only (those containing cities of over 100,000 population, 1920 census) have been considered in this study. (See Introduction for list of these States.)

definitely in favor of such special provision; five believed in a limited recognition.

3. Nineteen out of thirty States have lowered the minimum or increased the maximum of the compulsory attendance ages for atypical children with respect to normal pupils. The North Central States have provided for a longer attendance period than the North Atlantic States by almost a year in the case of the blind, and one and one-half years for the deaf. The average compulsory range for the deaf exceeds that of any other type. (See Table 4.)

4. State aid has been specified in approximately 50 per cent of the enactments. The North Central States have been most consistent in supplying aid; the Southern States, on the other hand, have given little special aid. (See Table 7.)

5. The blind, crippled, and deaf have received State aid in most instances, whereas the other atypical groups are inadequately supported. There is considerable variation among the States as to the amount of State aid provided for a given type.

6. Eighty-five of one hundred initial enactments concerning the public-school education of atypical children have been passed since 1914. (See Table 10.)

Conclusions.—1. There is need of a generally accepted terminology for expressions commonly used in connection with atypical classes. (See Tables 1 and 2.)

2. The prevalence of mandatory provision for classes in the North Central States and the almost entire absence of such mandatory legislation in the North Central Division points to the desirability of an investigation to determine which plan is the more practicable. (See Table 3.)

3. State aid, even though it be slight, should be offered everywhere for the establishment of atypical classes. (See Table 7.)

4. All atypical groups should receive due consideration in the distribution of State funds.

Chapter II

State Organization and Administration of Education of Atypical Children

The establishment of bureaus of special education in State departments of public instruction is a comparatively recent practice. Ferguson [1] reports none of these bureaus in existence in 1915. He points out that there were three, however, in 1920, and six in 1923. In 1928 [2] this number had grown to 10.

Prior to the inauguration of the first department of special education the blind, deaf, and feeble-minded in institutions were supervised by an assistant superintendent, department of welfare, or by some other State organization or individual whose duties were ordinarily divided among a number of functions. At present, 10 of the 30 States comprised in this investigation have established independent departments of special education. It is the purpose of this chapter to tell something of the organization of these bureaus and the regulations which they have issued for the proper maintenance of atypical classes. The teacher-preparing institutions which provide special courses for teachers of these classes will also be mentioned, in order to show the facilities within each State for the adequate preparation of "special class" teachers.

A. Organization

1. *States providing divisions of special education.*—The 10 States [3] having departments of special education [4] and the exact titles of the officials having direction of these departments are presented in Table 11. It will be noted that the titles are quite dissimilar; also, in the case of New York and Wisconsin, the direction of special education is shared by two officials. New York has two divisions concerned with special education, but neither one embraces all types of atypical classes. The chief of the Special Schools Bureau of New York has written as follows concerning the duties of his department:

This bureau supervises the work of institutional schools for the deaf and the blind, the schools in the State prisons, the Indian schools, and the New York

[1] Ferguson, A. W. Professional Staff of State Departments of Education. U. S. Bureau of Education Bulletin, 1925, No. 17. p. 7.

[2] Principal State School Officers and Their Assistants. U. S. Bureau of Education. Mimeographed bulletin dated February, 1928. 23 pp.

[3] It should be recalled that 30 States only (those containing cities of 100,000 population or over, 1920 census) are considered in this study.

[4] The U. S. Bureau of Education mimeographed bulletin of February, 1928, previously cited, shows that Wyoming was the only other State having a department of special education at that time.

State Nautical School. There are about 1,500 children receiving State appointments in institutional schools for the deaf. There are between one and two hundred other children in these schools. There are about 300 children receiving State appointments in institutional schools for the blind.[5]

TABLE 11.—*States having bureaus providing for the education of atypical children*

State [1]	Title of director
NORTH ATLANTIC DIVISION	
Connecticut	Director of special education and standards.
Massachusetts	Supervisor of special schools and classes.
New York	Chief, special schools bureau; Chief, crippled children's bureau.
Pennsylvania	Director of special education.
NORTH CENTRAL DIVISION	
Michigan	State director of division of special education for handicapped children.
Minnesota	Director of special classes for defectives.
Ohio	Director of division of special classes.
Wisconsin	Director of deaf, blind, and defective-speech classes; Director of special education.
SOUTHERN DIVISION	
Alabama	Director of exceptional education.
WESTERN DIVISION	
California	Chief, division of special education.

[1] Wyoming also has a State director of special education, but this State is not included within the scope of this study.

The other division embracing special education in New York—the Crippled Children's Bureau—has supervision over the education of the blind, crippled, and deaf in public-school classes. Wisconsin likewise has two officials charged with the supervision of special education—a director of special education and a director of deaf, blind, and defective-speech classes.

It seems desirable that those States having provision for the establishment of atypical classes should also have State departments of special education. These divisions could establish standards concerning the various phases of special class administration, with which they could require compliance as a prerequisite for participation in State funds. It seems reasonable to presume that such details could be more efficiently managed by a special department charged with this one phase of education. What is found in actual practice? A comparison of Tables 3 and 11 reveals the situation.

In the North Atlantic Division, New Jersey is the only State not having a department of special education, except Rhode Island, which has no "atypical" legislation. New Jersey requires classes for four types of atypical children and gives State aid for the crippled.

Illinois, Indiana, and Missouri, in the North Central Division, have permissive legislation for five types of classes, and give State aid for four, five, and six types, respectively, but have not established bureaus of special education. Iowa and Nebraska likewise have no

[5] Correspondence with this official, April, 1929.

departments, but their need for such bureaus, in view of special aid for only one type in each State, is slight.

The only other States requiring special mention are Oregon and Washington, neither of which has provided a special education department. Oregon requires classes for five types of exceptional children, but provides no State aid; Washington has no mandatory classes, but provides aid for two groups.

To summarize the preceding analysis, 20 of the 30 States comprised in this study have some mandatory legislation relative to atypical education. Ten of the twenty have provided bureaus of special education since 1915; the other 10 have no such departments. These latter States and their locations are: New Jersey, in the North Atlantic Division; Illinois, Indiana, Iowa, Missouri, and Nebraska, in the North Central; Tennessee, in the South Central; and Oregon, Utah, and Washington, in the Western. Of this group of 10 States, Iowa, Nebraska, Tennessee, and Utah have mandatory legislation for only one type. This leaves six States—New Jersey, Illinois, Indiana, Missouri, Oregon, and Washington—which appear to require separate departments of special education.

Four States have made statutory provision for the establishment of these departments. They are Connecticut, Illinois, Wisconsin, and Wyoming, the first three being comprised in the present study. In compliance with this law, departments have been inaugurated in Connecticut, Wisconsin, and Wyoming, but not in Illinois. The superintendent of public instruction of that State writes in a letter dated October 30, 1929, that "no State director of special education has been provided." The sections of the statutes of Connecticut, Illinois, and Wisconsin referring to the appointment of these officials are quoted below:

Connecticut: "The State board of education shall appoint a director of special education and standards and shall make regulations to carry out the purpose of this act." (Sec. 1, ch. 355, approved June 24, 1921.)

Illinois: "The superintendent of public instruction shall appoint a director of classes for specially handicapped children who shall assist school authorities in the classification of these special types and their organization into classes suitable to their handicaps in those localities in Illinois where such special facilities are not now available." (Sec. 6, senate bill 448, approved June 25, 1923.)

Wisconsin: "The State superintendent of public instruction shall appoint in his department * * * two persons of suitable training and experience who shall have general supervision of such classes and who shall give special attention to examining, testing, and classifying the pupils applying for admission to such special classes and perform such other duties as the State superintendent may direct." (Subsec. (3) of sec. 41.035 as amended May 27, 1921.)

Thus of the 24 States having legislation pertaining to the education of exceptional children, 10 have provided departments of special education, 3 of these being expressly stipulated in the laws of the States concerned. Table 11 shows that 4 of the 10 States are in the North

Atlantic Division, 4 in the North Central, 1 in the Southern, and 1 in the Western. In those States not having a director of special education the work of supervision is usually in charge of a deputy superintendent of education, an inspector of schools, or a director of elementary education.

2. *Organization of divisions of special education.*—The types of organization in a number of bureaus of special education, each representing a somewhat different plan, are described below. The material for this discussion has been obtained through correspondence with the State officials, from bulletins issued by the State departments,[6] and, in the case of Pennsylvania, by personal visitation.[7]

The Bureau of Special Education of Pennsylvania is in charge of a director and a supervisor. As the program of this department is carried out personally by the director and his assistant throughout the State, this is a line type of organization. Their power, furthermore, is greater, because the work of the bureau has a definite legal basis. The director informed the writer that most of his time was consumed at present in dealing with problems connected with classes for the mentally subnormal. He had very little opportunity, so he stated, to devote to the other types of special education. The director and supervisor spend much of their time in field work, advising and checking up on methods, equipment, etc. They also arrange for regional conferences of special class teachers at various points throughout the State. Considerable correspondence has to be attended to at the Harrisburg office, and bulletins must be issued at intervals covering "teacher certification," "procedures to be followed with different atypical groups," etc. No sharp line seems to be drawn as to the particular duties of each officer. It is obvious that two officials can not attend to the many details connected with this department. This is especially true because of the fact that the Pennsylvania law requires classes to be established for all possible types of atypical children. It seems that supervisors should be appointed for at least the major atypical groups.

The organization of the California Division of Special Education [8] comprises a director and five bureaus. The bureaus represented deal with the education of the blind, education of crippled children, education of the deaf, correction of speech disorders, and mental hygiene and subnormality.

The California department, in contrast to that of Pennsylvania, is a line-and-staff organization. The director is the line officer, whereas the chiefs of the various bureaus are primarily advisers,

[6] All bulletins of assistance in this study are listed in appendix, Pt. II.

[7] Visit to Pennsylvania Department of Special Education during January, 1929.

[8] Facts concerning California were obtained from a typewritten "Report of the division of special education" of that State embracing the period Sept. 1, 1927, to June 30, 1928.

and therefore staff officers. This department was organized September 1, 1927. The first work of the division was to send out questionnaires to the 27 largest cities of the State to find out the number of children having handicaps, the type of work being done for them, and the possibility of extending such work. The inquiry showed that in these 27 cities there were approximately 10,000 mentally retarded children (I. Q. below 80), 5,000 superior, and 9,000 physically handicapped. Of the last group, 3.4 per cent were blind, 1.6 per cent had defective vision, 17 per cent crippled, 8 per cent deaf, 40 per cent speech defectives, and 30 per cent miscellaneous (anæmic, cardiac, etc.).

The director concluded in her 1927–28 report, referred to previously, that there was—

1. A lack of definite knowledge of the actual conditions existing in the different localities.
2. A lack of interest in anything but the routine educational methods.
3. A lack of knowledge concerning modern constructive types of education.
4. A lack of accuracy in reporting such conditions as were known.

The recent report of the California Commission for the Study of Problem Children [9] will most probably lead to changes throughout the State and a modification of the organization of the department of special education to take care of the additional activities suggested.

The title of the Connecticut Bureau of Special Education, "Division of Special Education and Standards," is suggestive in its implication that the establishment of standards should be a function of such a department. This bureau consists of a director and one assistant. The Michigan Department of Special Education comprises a director and two supervisors.

It is of interest to note that the titles of the directors of special education in New York, Michigan, and Minnesota imply that the direction of gifted classes could not be a valid function of such a department. Of course, it is known that the laws of those States do not permit such classes at present. The titles of the directors in those States are, respectively, "Chief, Crippled Children's Bureau";[10] "State Director, Division of Special Education for Handicapped Children"; and "Director of Special Classes for Defectives." All of the other seven States providing these departments have given titles which could embrace any type of atypical group.

The procedure followed in Ohio in organizing special classes and the duties of a director of such classes are expressed very definitely in a recent publication of the Ohio State Department of Education.[11]

[9] Sacramento, Calif.: State Printing Office, 1929.

[10] The other New York bureau has charge of institutional cases.

[11] Hadley, Hazel C. Educating Crippled Children in Ohio. Columbus, State Department of Education, 1927. p. 13.

The special education department of this State consists of the director and an assistant. There are also four supervisors of sight-saving classes. Concerning the organization of classes, the author writes:

There is a State director of special classes whose duty it is to stimulate communities in caring for their children—all of them—and to show the value of special class work. This is done through the superintendent of schools, the board of education, and the local health authorities. * * * Superintendents are often glad for this assistance. The State director and an assistant go into a community not once but usually many times before the class is really in operation.

In many other States people are saying, "Why doesn't our State have classes for crippled children?" Perhaps the most significant reason may be that there is no one who is responsible for a State program. In the work of organizing classes for several types of physically handicapped, there is not recalled more than three occasions when the local district approached the State department to ask that a class be organized.

Illustrating the need for State direction of atypical classes, the author emphasizes the lack of uniformity in State appropriations for special classes in Ohio until a separate department had been created. Then certain standards were established and steps taken to see that they were maintained. She states:

From 1913 to 1920, inclusive, $641,000 was appropriated for the maintenance of special classes for physically handicapped children, and there was no one whose duty it was to direct this work. The State department of education approved claims on faith and without any sort of uniformity of system. The local districts deducted an amount which represented the per capita cost of educating an equal number of children in the grades before submitting their claims for reimbursement, and there was no one whose duty it was to determine the correctness of this cost. Districts asked for reimbursement in a lump sum, not specifying items for which the money was expended.

In July, 1921, a director was appointed, with the duty of seeing to it that each physically handicapped child of normal mentality be given a fair chance to get an education.

The director—

(*a*) Fixes the requirements made standard by the State for the maintenance of classes;

(*b*) Inspects classes to see that standards are maintained;

(*c*) Visits children receiving home instruction and those needing instruction;

(*d*) Surveys rural sections and makes recommendations on isolated cases relative to proper procedure in order to make instruction possible;

(*e*) Adjusts and approves claims for reimbursement amounting to $425,000 per year;

(*f*) Makes contacts with various State and private organizations interested in crippled children, with the idea of securing proper cooperation;

(*g*) Endeavors to interest local groups in the problem of educating crippled children, to the end that new classes may be organized and that sentiment may be stimulated for the proper State and local support of these classes.[12]

[12] Ibid., p. 14.

B. Administration

In order to determine the regulations and administrative procedures of the various States with reference to special education, the following documents were requested in a questionnaire sent to State educational officials during March, 1929:

(*a*) The latest law of your State on special education in the public schools.
(*b*) The latest report of your department on special education.
(*c*) Standards adopted by your State or department covering the certification of special class teachers, or other material regulating the organization of these classes.

In response to this request, various documents [13] and forms were received from 8 of the 10 States maintaining special departments, and from Indiana and Missouri, which do not have such bureaus of special education. It is significant to note that of the 24 States having some legislation relative to atypical children, only 10 forwarded printed material dealing with the regulation of such groups. Eight of the 10 responses were from States having departments of special education. Thus there were only two States represented in the group not having special education bureaus but which do have legislation embracing atypical education in the public schools. This latter group comprises 14 States. This small representation apparently indicates a lack of regulatory material issued by departments of public instruction in those States not maintaining departments of special education.

Of the 10 States forwarding printed material, Michigan, Minnesota, Missouri, and Ohio furnished data embracing all phases of administration. Pennsylvania's regulations concerning teacher certification were the most comprehensive of any received. Massachusetts has issued an excellent monograph dealing with the administration of special classes for retarded children. Michigan has a 56-page bulletin covering the Education of Handicapped School Children. Ohio, of all the States, forwarded the most descriptive material. The documents received from that State were: Bulletins enumerating "prescribed standards" for sight-saving, crippled, and deaf classes; a 134-page pamphlet entitled "Educating Crippled Children in Ohio"; and a booklet, Sight Saving Classes in the Public Schools (of Ohio), 90 pages.

As our analysis is concerned primarily with the State, we shall cite briefly typical regulations received from the commonwealths on the various phases of administration and for the different atypical groups. The certification of teachers, however, will be discussed later, as enough material was received on this subject to permit of a careful interstate comparison.

[13] These are mentioned during the course of this chapter.

1. *Regulations and standards of the States relative to special education.*—Massachusetts has issued the following regulations concerning the mentally subnormal:[14]

Organization: If there are three classes in a building, there should be three groups, one to a class, according to intelligence. The lower group should comprise children whose mental age is less than 7; the middle group, between 7 and 9; the upper group, over 9.

Equipment: Rooms should be light, well ventilated, attractive, and bathing facilities should be provided. There should be movable chairs and desks, looms, benches, sewing machines, cooking utensils, etc.

Records and reports: Correlation chart for each child; standard achievement tests each year. A 9 by 12 folder should contain physical record card, correlation chart, other records, reports of home calls, of school nurse, etc. Frequent reports should be made to parents.

Course of study: Younger children should have handwork two-fifths of school day; older children, three-fifths of school day. One hour per day is minimum for training in physical education and health.

Certain special rulings have been made by the Massachusetts Department of Special Education embracing classes for those pupils who are three or more years mentally retarded. They are:

1. There must be an annual examination of those children three or more years retarded in mental development by the State department of mental diseases or by an examiner approved by that department.[15] This examination covers very thoroughly the so-called "10-point scale," which embraces the following fields: Physical examination; family history; personal and developmental history; school progress; examinations in school work; practical knowledge and general information; social history and reactions; economic efficiency; moral reactions; mental examinations.

2. After an examination, if found to be three or more years retarded, pupils must be assigned to special classes unless other arrangements are made by the department.

3. Reexamination of all special-class pupils by examiner at least every two years; unusual cases, yearly.

4. Attendance of all those assigned is required.

5. Registration at one time must not be over 18.

6. Must be able to profit and not be detrimental to others, except in unusual cases; mental age must not be under 5.

7. At least two hours per day handwork is required.

8. Teachers have access to all records, but they are to be confidential.

Feeble-minded children are excluded from the public schools of Massachusetts. The suggested procedure for conducting classes for the subnormal is: (1) Study individual and determine ability; (2) make sure task is within his ability; (3) insist on successful completion of task.

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[14] Special Classes for Children Three or More Years Mentally Retarded. Bulletin of the Massachusetts Department of Education, Boston, Mass., 1927. Whole number 184, No. 7.

[15] 14 traveling clinics have been established with headquarters in various State institutions. These clinics make use of a physician, psychiatrist, and social worker or school nurse. The clinics have found about 1½ per cent of the school population to be mentally retarded.

No regulations were received from Massachusetts embracing classes for sight conservation or for the deaf, the two other types which the State law permits. A mimeographed bulletin [16] cited the facilities provided throughout the State for all types of atypical children except speech defectives and the gifted.

Pennsylvania has issued a very short résumé of the various types of atypical children provided for in the State law and a few suggestions under each type as to the organization of special classes.[17] Another document from this State, dealing in detail with the certification of teachers, will be discussed later.

Michigan has published a very complete booklet, entitled "The Education of Handicapped School Children in Michigan."[18] This bulletin treats all phases of the organization and administration of classes for the blind and partially sighted, the deaf and hard of hearing, the crippled, defective in speech, and mentally retarded. There is also a section on the training of teachers and citations of the Michigan laws relative to atypical children.

Minnesota has a 15-page booklet entitled "Standards—Special Classes for Defectives."[19] Standards are set forth for blind, crippled, deaf, speech, and subnormal classes, all of which are specified in the State law. General standards for all classes are:

Admission: No child shall be admitted to any special class until properly examined by a licensed physician and a record of such examination filed with the local school authorities. * * * Each child * * * should be reexamined each year.

Records and reports: A complete attendance record of each child must be kept and reports * * * made from time to time. * * *

Rooms: All rooms * * * shall conform to the standards of the State board of education as outlined in its bulletin entitled "Buildings and Sanitation."

Special standards for the various atypical groups are given below.

Blind.—Enrollment: Law permits classes to be established for five pupils.

Admission: In addition to physical examination * * * a special examination shall be made annually to determine degree of defective sight whenever total blindness does not exist.

Methods: Shall be equivalent to those employed in the State school for the blind at Faribault.

State aid: None to be given for attendance under 20 days.

Crippled.—Enrollment: Law specifies minimum of five.

Admission: Requirements as given in the law.

Nurses for these classes shall * * * have had requisite training and must have knowledge of physiotherapy and orthopedics.

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[16] Opportunities for Handicapped Children. Boston, State Department of Education, February, 1929. 4 pp. Mimeographed.

[17] Special Education in Pennsylvania. Harrisburg, Pa., Department of Public Instruction, July 1, 1925. 6 pp. Mimeographed.

[18] By C. S. Berry. Published by Superintendent of Public Instruction, Lansing, Mich., 1926. Bulletin No. 11. 56 pp.

[19] Minnesota Department of Education, St. Paul, Minn., August, 1927.

Equipment: Rooms to be on ground floor. * * * Special equipment * * * should be provided as needed.

Transportation: Schools * * * must provide adequate transportation facilities.

Methods: Regular curriculum with proper adaptations, as far as possible. Physical and industrial training suited to the needs of the pupils must also be provided * * *.

Deaf.—Enrollment: The law requires a minimum actual attendance of not less than five deaf children over 4 years of age and not exceeding maximum school age. The State department further specifies that maximum shall not exceed 10 unless work is on a departmental basis, when maximum may go to 12.

Admission: In addition to physical examination * * * an approved auricular examination shall be made.

Methods: Must comply with requirements of State commissioner of education. All schools must be conducted by the combined system, which includes the oral, aural, manual, and every method known to this profession * * *.

State aid: * * * No aid for a child in attendance less than 20 days.

Defective speech.—Enrollment: To be enrolled in regular classes and to meet speech teacher in a special room. * * *

Admission: In addition to physical examination * * * the particular type of speech defect must be determined. * * *

Methods of treatment: Each case must be recognized as a special problem and treatment based upon a scientific understanding of the essential nature of the defect. * * *

Mentally subnormal.—Enrollment: Not over 15 if a 1-teacher department. If there are three or more teachers and work is departmentalized, there may be as many as 18 in a class. Minimum in a class is 5.

Admission: 1. Mental condition to be examined by use of standard tests accepted and approved by the commissioner of education.

2. Admission is restricted to those certified by superintendent of schools or an assistant, from an eligible list approved by commissioner of education.

3. Intelligence quotient must be between 50 and 80. Mental age not less than 4 years.

Methods: To be largely individual, based upon mental age of pupil, etc.

State aid: No aid shall be allowed for a child in attendance less than 20 days.

Missouri has formulated a very comprehensive set of regulations [20] for the guidance of school administrators in establishing special classes. These will not be given in their entirety, but are presented in a summarized form below. First, the regulations specify that no State aid will be given unless the State requirements as to admission and discharge, qualifications of teachers, methods of instruction, and special supplies and equipment have been complied with. The general regulations for all atypical classes are as follows:

Admission of pupils: Pupil must be certified by local superintendent or official in charge of examination and placement of pupils in special classes as result of a proper physical or psychoeducational examination, or both.

Effort should be made to secure appropriate remedial treatment for children suffering from defects, disorders, or diseases.

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[20] General Rules and Regulations Applying to Special Public School Classes for Feeble-Minded, Deaf, Blind, Backward, Crippled, and Speech Defective Children. St. Louis, State Department of Education, 1921. 6 pp. Mimeographed.

Records should be kept of all examinations, findings, assignments, and treatments.

Discharge: No pupils should be discharged from a special class except upon action of local superintendent or an official designated by him. None should be retained in special class whose condition is so improved that he can cope with work in the regular grades.

Methods of instruction: General character of instruction, training and care should be largely individual, based on peculiar interest, habits, previous history, and especially mental and physical handicaps of each pupil.

Methods and content should be altered * * * as to meet developing needs of the child.

Organization of class: Whenever possible, two or more classes in a center; Bright, cheery quarters, ample playground space; adequate appointments, etc.

Local administrative direction: It is suggested that all classes in the large cities be under supervision of one official who is an expert in the field of special education.

Ohio, through the director of the division of special classes for handicapped children, has formulated the most comprehensive regulations relative to special classes that have come to our attention. The Ohio law permits classes to be established for the blind, semiblind, deaf, and hard of hearing, and requires them for the crippled. Section 7761 of the General Code of this State refers to the formulation of standards as follows:

The director of education shall prescribe standard requirements for day schools for the deaf, blind, and crippled, and other instruction of such children entitled to State reimbursement, which requirements shall include the conditions under which such schools are conducted, the methods of instruction and supervision, the qualifications of teachers and the conditions and terms under which they are employed, the special equipment and agencies for instruction provided, and the conditions of the rooms and buildings in which the schools are held.

The director, however, regards the standards that have been devised as minimum requirements, according to this statement, which appears in each of the three bulletins [21] on "prescribed standards":

These standard requirements are not intended as complete statements of the conditions under which a board of education should conduct such classes, but are, more properly speaking, minimum requirements with which, in the judgment of this office, any board of education should comply to entitle them to State recognition.

School districts shall comply with these regulations to receive the State subsidy authorized by section 7757 of the General Code of Ohio.

The general plan of the bulletins will be presented in order to show the extent to which Ohio has gone in this field.

I. *Eligibility of pupils.*- -Sight saving: (*a*) Definition of blindness from the law; (*b*) eye conditions that require segregation in a special class (10 conditions are specified); (*c*) mentality; (*d*) coeducation with those having sight in oral work.

Crippled: (*a*) Definition from the law; (*b*) department regulation as to eligible types; (*c*) mentality.

[21] Prescribed Standards for: Sight-Saving Classes; Classes for Crippled Children; Deaf Children. Three bulletins by Division of Special Classes for Physically Handicapped Children, State Department of Education, Columbus, Ohio, 1926, 1925, and 1926, respectively.

Deaf: (*a*) Definition as contained in law; (*b*) statement that "deaf" is intended to cover both totally and partially deaf children; (*c*) coeducation with hearing children as far as possible.

II. *Classroom.*—Sight saving: Eight requirements in detail.

Crippled: Seven detailed specifications.

Deaf: Type of room, blackboard space, decorations.

III. *Size of classes.*—Sight saving: One teacher, not over 16 pupils. If four or more grades in a class, teacher shall not have over 12 pupils without consent of supervisor. In no school district having more than one sight-saving class shall more than five grades be assigned to one teacher.

Crippled: No class to be started with less than eight pupils. Eighteen pupils is maximum in a multigraded class; 25 in room of one grade. Other details are given as to type of work to be done, etc.

Deaf: Not over 15 pupils in a multigraded class. If there are 4 grades enrolled, no teacher shall have over 12 pupils; with 5 grades, not over 10 pupils. In no school district with more than one class for the deaf shall more than five grades be assigned to one teacher. Five pupils is minimum for one or two grades. A one-grade class should have not less than eight children.

IV. *Administration.*—For each of the three types the following topics are treated under this designation: Supervision, qualifications of teachers, salaries of teachers, and organization of new classes. Under supervision, section 7761 of the General Code is quoted as follows: "The director of education shall select some competent person or persons to inspect all classes established under section 7755, General Code, at least once a year and to report concerning the instruction in such classes, the conditions under which they are maintained, and the conditions under which such persons are boarded."

The salaries of these teachers are to be:

Sight saving: Not less than $150 more per year than teachers of regular grades.

Crippled: Not less than $100 more per year than teachers of regular grades.

Deaf: Not less than $150 more or not more than $500 more than teachers of regular grades.

V. *Equipment and supplies.*—(*a*) Items of major equipment to be approved by State director before purchase.

(*b*) Equipment purchased with State money is property of the State.

(*c*) List of necessary equipment may be had upon application to director.

VI. *Special appliances and current operating cost.*—Section 7757, General Code: "* * * The director of education shall be the final authority in deciding all questions relative to what constitutes special appliances and current operating cost under the terms of this section."

In conformity with this act, the director has itemized all special appliances for each type of atypical class. The subdivisions under "current operating cost" are: Salaries, transportation, educational supplies, school feeding, and research. The bulletin on crippled classes also has a section on physiotherapy and one on transportation. At the end of the sight-saving bulletin the reader is directed to refer to the department for information relative to classes for the totally blind.

In addition to the foregoing bulletins, two very complete booklets have been received. One is entitled "Educating Crippled Children in Ohio";[22] the other, "Sight Saving Classes in the Public

[22] Hadley, Hazel C. State Department of Education, Columbus, Ohio, 1927. 134 pp.

Schools." [23] The value of having specific legal enactments concerning special class administration is well illustrated in Ohio, where we have noted a very comprehensive series of standards and regulations which have been an outgrowth of the law pertaining to atypical classes.

Wisconsin has permissive legislation for all types of atypical children except the disciplinary; State aid is provided for the blind, crippled, deaf, mentally subnormal, and gifted. A 1-page set of regulations was received from the State superintendent of public instruction. This refers only to classes for the mentally subnormal.

I. State aid. (See Table 7.)

II. I. Q. must range between 50 and 70. (If State aid is drawn.)

III. Class enrollment must not be less than 7 nor more than 15.

IV. Certification of teachers shall be approved by State superintendent of public instruction.

V. Equipment * * * shall be approved by State superintendent of public instruction.

VI. If a town has only 7 children enrolled in the schools with I. Q. between 50 and 70, children with intelligence over 70 who are three or more years retarded in the grades may temporarily be enrolled in such classes. State aid, however, will only be given for those whose I. Q. is between 50 and 70.

2. *Certification of special class teachers.*—Eight of the ten States which forwarded special class regulations, etc., included data on teacher certification. Four of the eight—Pennsylvania, Michigan, Minnesota, and Missouri—supplied complete data on certification; the other four States furnished partial material on this subject.

Wallin [24] has formulated the following qualifications for teachers in all types of special classes.

(*a*) Preliminary fundamental training equivalent to a two years' professional course in a standard normal school or college.

(*b*) Basic technical training, including courses in clinical psychology and psychopathology, on subnormal and abnormal children and in the clinical examination of exceptional children. * * *

(*c*) Specific technical preparation for training the particular type of defective which they expect to teach. * * *

(Special class teachers should have earned from 12 to 15 semester hours' credit in the basic and specific technical courses, but it will scarcely be possible to put this standard into immediate effect throughout the country. It is desirable, but probably not essential, that the special class teacher should first have had several years of teaching experience.)

Let us examine the qualifications required by Pennsylvania, Michigan, Minnesota, and Missouri, the four States which have submitted this material in detail.

Pennsylvania (standard certificate): (1) Graduation from 4-year high school or equivalent. (2) Seventy semester hours of approved training, as follows: (*a*) Academic training, 20 semester hours; (*b*) general professional courses, 20 semester

[23] Hadley, Hazel C. State Department of Education, Columbus, Ohio, 1926–27. 90 pp.

[24] Wallin, J. E. W. The Education of Handicapped Children. 1924. p. 110.

hours. (Successful teaching experience may be counted up to 24 semester hours in groups (*a*) and (*b*) at rate of 4 semester hours per year of experience.) (*c*) Special professional preparation, 20 semester hours; (*d*) unclassified, 10 semester hours. Total, 70 semester hours.

Michigan: (*a*) A State life certificate or its equivalent in college training (two years); (*b*) one year teaching experience with normal children; (*c*) one year of special technical training in the field elected.

Minnesota (elementary and high): (*a*) Academic and professional training required for teachers of elementary grades or of high school; (*b*) two years of successful experience in teaching normal children; (*c*) approved special training. (For a 2-year special certificate the requirement is 7 quarter credits for the blind, speech defectives, and subnormal; 6 for the crippled; and 24 for the deaf.)

A 5-year certificate will be issued to holder of a special certificate upon evidence of any one of the following:

Four years'[25] experience in teaching a subnormal class and 20 quarter credits of approved special training.

Two years' experience in teaching a deaf class and 32 quarter credits of approved special training.

Four years' experience in teaching speech defectives and 20 quarter credits of approved special training.

Four years' experience in teaching blind or sight-saving classes and 20 quarter credits of approved special training.

Two years' experience in teaching crippled children and 12 quarter credits of approved special training.

Missouri: (*a*) Two-year course in standard normal school or college; (*b*) eight semester hours' credit in courses especially designed to prepare for a particular type of class.

Upon comparing the requirements of the four preceding States, it is seen that each one requires graduation from normal school or two years in college. (This is implied in the case of Pennsylvania.) Experience is explicitly required in Michigan and Minnesota, but not in Pennsylvania nor in Missouri. Michigan requires one year of teaching experience with normal children. Minnesota requires two years in teaching normal children for a 2-year certificate, and from two to four years' experience in teaching the particular type of class in order to obtain a 5-year certificate. Pennsylvania will accept from 32 to 36 semester hours for experience out of a total of 70 semester hours of approved teaching. (Four semester hours are counted as a year of experience.) Missouri makes no quantitative reference to teaching experience. Thus two of the four States insist on preliminary experience—one year in the case of Michigan, two years in Minnesota. The latter State also requires experience in the particular atypical class in order that a permanent certificate may be procured.

Special professional preparation is required to the extent of 20 semester hours in Pennsylvania, 1 year in Michigan, 12 to 32 quarter credits in Minnesota, and 8 semester hours in Missouri. These may be compared with Wallin's suggestion, previously noted, that there

[25] Two years of this experience must be in the public schools of Minnesota. This also applies to the 4 other atypical types which follow.

should be 12 to 15 semester hours' credit in the basic and specific technical courses. Missouri's requirement would not conform to this standard. It is of interest to observe, however, that the standards established for special classes in Missouri were formulated by Wallin.[26] These were intended to be a minimum requirement, whereas the 12 to 15 hours' credit represent a desirable goal which may not be achieved in all cases for some years. Speaking of the amount of training required for teachers of the mentally subnormal, Wallin writes:

> Eventually two years of specialized training in addition to the two years' normal course may be established, by common consent, as the minimum requirement * * *. But the country at large is not yet ready to take this step. The most that we can do at the present juncture is to insist that graduates from the regular normal-school course should be required to pursue a special course for a year, a semester or a summer session * * *. The very minimum requirement should be six or seven semester hours of credit in the strictly technical branches. A few years of contact with normal children in the lower grades, will in my judgment, prove advantageous.[27]

Connecticut [28] requires a teacher of a mentally subnormal class to be a graduate of a 4-year high school and to have had three years' experience in the elementary grades (or one year experience with a subnormal class prior to July 1, 1922). After two years the teacher must pass examinations in "special psychology," "special physical training," and "special manual training." Massachusetts requires that all teachers of subnormal classes employed after September 1, 1929, shall have had two years of normal-school training and at least one year of specialized training in teaching retarded children.

Comparing the two foregoing requirements, it is noted that Connecticut does not require normal-school training but does specify three years of experience. No special professional training is required. Massachusetts stipulates normal-school training and one year of specialized training, but no reference is made to experience.

As previously stated, Pennsylvania has specified the type of special professional training required for the certification of a special class teacher more fully than any other State. Twenty semester hours of specialized preparation are stipulated. The requirement comprises experience in the work desired, content courses, manual training, etc., and special methods or an approved examination. The minimum and maximum semester-hour requirements are given in Table 12. The quantitative requirements for the blind, sight-conservation, and deaf classes are identical. Likewise, those for the orthopedic and orthogenic are the same. No experience is required for any type

[26] Op. cit., p. 256.
[27] Ibid, pp. 256, 257.
[28] Rules and Regulations Concerning State Teachers' Certificates. Connecticut School Document, Hartford, Conn., 1925, No. 5, p. 32.

of class, but as high as 12 semester hours will be accepted for blind, sight-conservation, deaf, and gifted classes. Manual training experience is mandatory for the orthopedic and orthogenic, a minimum of two hours being stipulated in each case. Special methods or an examination have been emphasized for the blind, semisighted, and deaf—a minimum of six hours for each being required.

All of the cases cited have indicated a tendency on the part of educational authorities to require special preparation or experience, or both, as a prerequisite for a position as teacher of an atypical class. Furthermore, evidence of additional professional specialization is usually required after several years of service. We will next inquire into the opportunities afforded teachers in the 30 States being considered for acquiring professional training in the field in which they are interested.

TABLE 12.—*Special professional requirements in Pennsylvania for teachers of atypical classes*

Classes	Experience		Semester hours						Total minimum
			Content courses		Manual training, industrial arts, etc.		Special methods or approved examination		
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	
Blind	0	12	4	8	0	6	6	8	20
Sight-conservation	0	12	4	8	0	6	6	8	20
Orthopedic	0	8	6	10	2	6	2	6	20
Deaf	0	12	4	8	0	6	6	8	20
Nutrition	0	8	8	10	0	6	2	6	20
Speech	0	8	6	12	0	4	4	8	20
Orthogenic [1]	0	8	6	10	2	6	2	6	20
Non-English-speaking	0	8	4	12	0	6	2	6	20
Gifted	0	12							20

[1] Includes mentally subnormal, backward, disciplinary, and restoration.

C. Teacher-Preparing Institutions for Teachers of Atypical Classes

1. *Their location and type of course.*—Administrators can hardly insist on special professional training on the part of prospective teachers of special classes if few institutions offer that training. Likewise, there will be less probability of classes being started if properly trained teachers are unavailable. In order to determine the degree to which this need has been met in the various States, the superintendent of public instruction of each of the 30 States under consideration was asked to enumerate the institutions in his State which offered special preparation for special class teachers. This information was supplemented by data obtained from the most recent Government bulletins containing this material. Both these sources were checked with replies received from city departments of special education.

Table 13 shows that 11 States offer such courses. The States are Connecticut, Massachusetts, New York, and Pennsylvania, of the

North Atlantic Division; Michigan, Minnesota, Missouri, Ohio, and Wisconsin, of the North Central Division; Tennessee, of the Southern Divisions; and California, of the Western Division. Twenty-eight institutions in the 11 States are available for this instruction. States which replied that they were not offering courses for special class teachers include Rhode Island, Indiana, Iowa, Delaware, Maryland, and Washington.

TABLE 13.—*Facilities reported by 11 States for the professional preparation of teachers of atypical classes* [1]

States	Type of preparation								Institutions	Location
	Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Mentally subnormal	Gifted		
Connecticut							✓		State Summer School	New Haven.
Massachusetts			✓				✓		Salem Normal School	Salem.
							✓		Hyannis Normal School	Hyannis.
	✓								Perkins Institute [2]	Watertown.
			✓						Clarke School for the Deaf	Northampton.
New York			✓						School for the Deaf [3]	104 Lexington Ave., New York City.
Pennsylvania					✓		✓		University of Pennsylvania.	Philadelphia.
					✓		✓		Temple University	Do.
							✓		Geneva College	Beaver Falls.
					✓				Pennsylvania State College.	State College.
			✓						Pennsylvania Institute for the Deaf.	Mount Airy.
			✓						Western Pennsylvania School for Deaf.	Edgewood.
	✓								Pennsylvania Institute for Instruction of the Blind. [2]	Overbrook.
Michigan	[4] ✓	✓	[5] ✓				✓		Michigan State Normal College.	Ypsilanti.
Minnesota							✓		University of Minnesota	Minneapolis.
Missouri							✓		University of Missouri	Columbia.
			✓						Central Institute for Deaf [3]	St. Louis.
							✓		Harris Teachers College	Do.
Ohio	[6] ✓						✓		University of Cincinnati	Cincinnati.
	[6] ✓						✓		Western Reserve University.	Cleveland.
							✓		Ohio University	Athens.
							✓		Ohio State University	Columbus.
							✓		Miami University	Oxford.
Wisconsin	[4] ✓		✓		✓		✓		Milwaukee State Teachers College.	Milwaukee.
Tennessee	[4] ✓								George Peabody College for Teachers (summer session). [2]	Nashville.
California					✓				San Francisco State Teachers College.	San Francisco.
					✓				University of California (summer school).	Berkeley.
			✓						University of Southern California, (summer session).	Los Angeles.
Totals	7	1	9	0	6	0	16	0	28	
States	6	1	7	0	3	0	8	0		

[1] States are grouped according to sections of the country. The data of this table have been obtained directly from State superintendents of public instruction, unless otherwise indicated. It has been checked with replies received from city departments of special education.

[2] Phillips, F. M. Schools and classes for the blind, 1926–27. U. S. Bureau of Education Bulletin, 1928, No. 9, p. 1.

[3] Phillips, F. M. Schools for the deaf, 1926–27. U. S. Bureau of Education Bulletin, 1928, No. 8, p. 1.

[4] Blind and sight saving.

[5] Deaf and hard of hearing.

[6] Sight saving.

What type of instruction is offered in the 11 States which do offer the requisite courses? This may be noted in Table 13, which specifies the name of the institution, its location, and type of atypical group for which special preparation is provided. Courses for sight-saving classes alone are offered in two institutions in Ohio; for classes for the blind alone in Massachusetts and Pennsylvania; for blind and sight-saving classes in Michigan, Wisconsin, and Tennessee. Michigan is the only State which reports provision for teachers of crippled children. Institutions for teachers of the deaf are reported by the following seven States: Massachusetts, Pennsylvania, New York, Michigan, Missouri, Wisconsin, and California. Opportunities for speech teachers are afforded in three States—Pennsylvania, Wisconsin and California. Special preparation for teachers of mentally subnormal children is reported as being offered in 16 training schools in 8 States.

2. *Relationship to existing need.*—"Existing need" for the purpose of this discussion has been determined solely by the legal enactments of the States relative to the establishment of special classes. The probable number of children requiring special instruction in any State has not been considered in the analysis to follow. In conformity with the preceding definition of "existing need," it appears that Connecticut has considerable necessity for well-prepared special class teachers, since six types of classes are mandatory in that State. Michigan and Massachusetts stand alone in offering instruction for all types of classes permitted in the State law. Minnesota, Missouri, Ohio, and California fall considerably short in the types of instruction represented. No reference is made here to New York, as direct word was not received from that State. Wisconsin, on the other hand, offers four different courses. Pennsylvania and Michigan equal this record, which is not exceeded by any other State. It is of interest to note that Pennsylvania has three speech-instruction centers and three for teachers of the mentally subnormal; Ohio offers the latter instruction in five cities.

It is apparent that little can be done in the development of classes for exceptional children unless better facilities are offered for the proper preparation of the teachers of these classes. The reader is referred to an admirable presentation of the training of special class teachers as carried out at the Michigan State Normal College at Ypsilanti, described in a bulletin entitled "The Education of Handicapped School Children in Michigan." [29] In referring to the courses offered at this institution, the director of special education of the Detroit schools claims "there is no State in the Union that has in

[29] Department of Public Instruction, Lansing, Mich., 1926, Bulletin No. 11, pp. 44–46.

operation a more comprehensive plan for the training of special teachers." [30]

D. Summary and Conclusions

1. Ten of twenty-four States having legislation pertaining to atypical classes have State bureaus of special education. Ten States having mandatory enactments relative to special classes have not established State departments of special education. (See Table 11.)

2. Most of the bureaus of special education appear to have too small a staff for efficient work.

3. Certification requirements for all special class teachers required under the law were received from Pennsylvania, Michigan, Minnesota, and Missouri. The Pennsylvania certification specifications are more comprehensive than those of any other State. (See Table 12.)

4. The general tendency in certification requirements for special class teachers is an insistence upon special professional preparation or experience, or in some instances upon both.

5. Institutions providing special preparation for teachers of atypical classes are few in number. Of 30 States replying, 11 reported a total of 28 such institutions. The Southern and Western States are poorly represented in this respect. (See Table 13.)

6. Only two States—Massachusetts and Michigan— have facilities for the instruction of teachers of all atypical classes prescribed in their State laws. No special curriculum is reported for teachers of open-air, disciplinary, or gifted classes in any State.

7. Seven States definitely reported the absence of institutions for the instruction of prospective teachers of special classes. Three of the seven States seem to be in special need of this instruction because of the variety of atypical classes permitted under their State laws.

8. Divisions of special education should be established in all of the more populated States in order to unify and coordinate the special class activities of the State and to establish definite standards.

9. Many more institutions should offer courses for the professional preparation of special class teachers.

STATE LAWS RELATING TO EDUCATION

The following bulletins have been issued by the United States Office of Education:

1915, No. 47, covers all school laws in force in 1915.
1918, No. 23, covers laws enacted during 1915, 1916, 1917.
1920, No. 30, covers laws enacted during 1918 and 1919.
1922, No. 20, covers laws enacted during 1920 and 1921.
1922, No. 43, covers laws enacted during 1921 and 1922.
1925, No. 2, covers laws enacted during 1922 and 1923.

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[30] Ibid., p. 46.

1925, No. 35, covers laws enacted during 1923 and 1924.
1928, No. 20, coves existing laws relating to compulsory education.
1929, No. 5, covers existing legislation for crippled children.
1929, No. 27, covers laws enacted during 1926 to 1928.

PRESENT STATE LAWS RELATING TO PUBLIC-SCHOOL CLASSES FOR ATYPICAL CHILDREN

Alabama, 1927, Law, No. 498.
California, 1927, Laws, chapter 585; 1927, Act No. 7513; 1921, chapter 685.
Connecticut, 1921, Laws, chapter 355.
Illinois, 1929, Laws, act of April 23; 1925, June 30, amendment of act of June 19, 1923; 1917, section 136.
Indiana, 1927, Laws, chapter 211.
Iowa, 1927, Code, chapter 224, amendment of 1921, chapters 62 and 98.
Kansas, 1927, Laws, sections 138 and 138A.
Kentucky, 1924, Laws, chapter 62.
Louisiana, 1922, Laws, Act 111.
Maryland, 1914, Laws, chapter 165.
Massachusetts, 1925, Laws, chapter 286; 1923, chapter 361; 1922, chapter 231.
Michigan, 1927, Laws, Act 236; 1923, Act 313; 1923, Act 122.
Minnesota, 1923, Laws, sections 2894, 2895, 2899; 1921, chapters 141, 366.
Missouri, 1921, Laws, sections 11147–11150, 11150A, 11150B, 11150C.
Nebraska, 1922, Compiled Statutes, sections 6548–6550D; 1913, Revised Statutes, Section 6927.
New Jersey, 1928, Laws, chapters 53, 54; 1913, Chapter 340.
New York, 1928, Laws, chapter 646; 1927, chapter 492; 1925, chapter 227; 1923, chapter 395; 1920, chapter 457; 1917, chapter 553.
Ohio, 1925, G. C., sections 7755–7761; 1923, S. B. 281.
Oregon, 1929, Laws, chapter 322; 1923, chapters 28, 88.
Pennsylvania, 1925, Laws, section 1413 (chs. 70, 76).
Tennessee, 1921, Laws, chapter 151.
Utah, 1921, Laws, chapter 105.
Virginia, 1930.
Washington, 1923, Laws, section 661; 1903, section 1.
Wisconsin, 1927, Laws, sections 20, 32, 41.01, 41.02.
Wyoming, 1919, Laws, chapter 41 (H. B. 92).

PART II. PROVISION MADE IN CITIES OF OVER 100,000 POPULATION

Introduction

In the chapters of Part I we have analyzed the legislation of certain States [1] pertaining to the public-school education of atypical children, the organization and administration of special State departments for carrying into effect the provisions of these laws, and educational facilities for the proper training of prospective teachers of special classes. In this part of the study the 68 cities of over 100,000 population will be examined with respect to the types of atypical classes organized, their enrollment, the organization and administration of local departments of special education, and the cost of this training in relation to other educational expenditures. Comparisons will be made among the various cities and sections of the country as to their facilities for education of atypical children and its relative cost. Reference will be made to Part I in an attempt to trace the relationship between the State legal enactments relative to the public-school education of exceptional children and the facilities offered by the cities in this field. Subsequent chapters will deal with the types of special classes in the 68 cities, the year of establishment, the enrollment and average number per class, and a comparison of this enrollment with the probable number of these children in the community. These data have been obtained by means of personal letters and questionnaires. A complete response was procured as to the types of classes; 42 satisfactory replies dealt with the number of classes, enrollment, etc. The former data were secured during 1928–29; the latter cover the school year, 1927–28.

[1] 30 States were analyzed comprising those which contained cities of over 100,000 population (1920 census).

Chapter I

Statistics of Educational Provisions for Atypical Children

A. Types of Special Classes in Cities of Over 100,000 Population (1920 Census)

These types are tabulated and analyzed in Table 1. The "principal types" there indicated include those to which repeated reference has already been made. Any large city may be expected to provide for all of these types; the others, while desirable, may be regarded as secondary. In order to have a satisfactory basis for comparison and to avoid duplication, classes for the blind or sight defective have been indicated under the one caption "blind"; classes for the deaf or hard of hearing have been included under the heading "deaf"; backward or mentally defective children are indicated by the designation "subnormal." The "open-air" group includes those children who are ordinarily given this form of treatment, i. e., tubercular or pretubercular, undernourished, and anæmic. "Foreigners'" classes are for those children requiring special instruction in English; "homebound" refers to home instruction for those unable to attend school; "prevocational" is a type of training provided for overage children; "probation" refers to boys and girls awaiting the action of the court; "restoration" refers to pupils, not necessarily backward, who have fallen behind in their school work because of absence, sickness, or for other reasons.

TABLE 1.—*Types of atypical classes in cities of over 100,000 population, 1928–29* [1]

Cities	Rank in population	Principal types									Average per State	Other types						Grand total
		Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Subnormal	Gifted	Total		Foreigners	Homebound	Hospital	Prevocational	Probation	Restoration	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
NORTH ATLANTIC DIVISION																		
Connecticut											3.0							
Bridgeport	44		√					√		2								2
Hartford	46				√			√		2								2
New Haven	39	(2)	√		√		√	√		5								5
Massachusetts											4.9							
Boston	7	(2)	√	(3)	√	√	√	√		7				√		√		9
Cambridge	64	(2)	√	(4)	√	√		√		6			√					7
Fall River	54	(2)		(4)	√	√		(5)		5								5
Lowell	61	(2)			√			(5)		3								3
New Bedford	53	(2)	√		√			√		4				√				5
Springfield	51	(2)		√	√			(5)		4				√				5
Worcester	35	(2)		√	√			√	√	5				√				6
New Jersey											5.0							
Camden	58		√					(5)	√	3								3
Jersey City	22	(6)	√	√	√	√	√	(5)		7		√						8
Newark	15	(6)	√	(3)	√	√	√	√		7							√	8
Paterson	49	(6)	√	√	√		√	√		6								6
Trenton	55				√			√		2								2
New York											5.2							
Albany	60	(2)		√	√			√		4								4
Buffalo	11	(2)	√		√	√		√		5						√		6
New York	1	(6)	√	√	√	√	(7)	√		7			√	√				9
Rochester	23	(2)	√	(4)	√	√	√	√	√	8		√		√	√	√	√	13
Syracuse	37	(2)		√	√			(5)		4								4
Yonkers	68				√	√		√		3								3
Pennsylvania											3.8							
Philadelphia	3	(2)	√	(3)	√	√	(7)	√		7		√		√		√	√	11
Pittsburgh	9		√		√	√		√		4		√		√				6
Reading	66				√			√		2					√			3
Scranton	47							√	√	2								2
Rhode Island											4.0							
Providence	28		√		√	√		√		4					√			5
Average		0.7	0.6	0.5	0.9	0.5	0.3	1.0	0.2	4.5		0.2	0.1	0.3	0.1	0.2	0.1	5.5

[1] All of the data of this table have been obtained by personal correspondence with officials of the cities concerned.
[2] Sight-saving classes only.
[3] Deaf and hard-of-hearing classes.
[4] Hard-of-hearing classes only.
[5] Mentally defective and backward classes.
[6] Blind and sight-saving classes.
[7] Classes and parental school.

TABLE 1.—*Types of atypical classes in cities of over 100,000 population, 1928–29* —Continued

Cities	Rank in population	Principal types									Average per State	Other types						Grand total
		Blind	Crippled	Deaf	Open air[13]	Speech	Disciplinary	Subnormal	Gifted	Total		Foreigners	Homebound	Hospital	Prevocational	Probation	Restoration	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
NORTH CENTRAL DIVISION																		
Illinois											6.0							
Chicago	2	(6)	✓	✓	✓		✓	✓		6						✓		7
Indiana											3.0							
Indianapolis	21		✓		✓			(5)		3								3
Iowa											6.0							
Des Moines	52	(2)	✓	(3)	✓	✓		✓		6			✓		✓			8
Kansas											3.0							
Kansas City	65			✓	✓			✓		3								3
Michigan											7.0							
Detroit	4	(6)	✓	(3)	✓	✓	✓	(5)		7			✓					8
Grand Rapids	48	(6)	✓	✓	✓	✓	✓	✓		7							✓	8
Minnesota											5.5							
Minneapolis	18	(6)	✓	✓	✓	✓		✓		6								6
St. Paul	30	(6)		✓		✓	✓	✓		5								5
Missouri											6.5							
Kansas City	19	(2)	✓	(3)	✓		(7)	✓		6				✓	✓			8
St. Louis	6	(2)	✓	(3)	✓	✓	(8)	✓		7				✓		✓		9
Nebraska											2.0							
Omaha	34					✓		✓		2								2
Ohio											5.7							
Akron	32	(2)	✓	✓	✓			✓		5				✓	✓			7
Cincinnati	16	(2)	✓	✓	✓		(8)	✓		6			✓					7
Cleveland	5	(6)	✓	✓	✓	✓	✓	(5)	✓	8		✓			✓			10
Columbus	29	(2)	✓	(4)	✓	✓	✓	(5)		7			✓				✓	9
Dayton	43	(2)	✓	✓				✓	✓	5					✓			6
Toledo	26	✓	✓	✓				✓		4								4
Youngstown	50	(6)	✓	(3)	✓			(5)		5		✓						6
Wisconsin											6.0							
Milwaukee	13	(6)	✓	✓	✓	✓		(5)		6		✓	✓	✓	✓			10
Average		0.8	0.8	0.9	0.8	0.5	0.5	1.0	0.1	5.5		0.2	0.3	0.2	0.3	0.1	0.1	6.6
SOUTH ATLANTIC DIVISION																		
Delaware											2.0							
Wilmington	63					✓		✓		2								2
District of Columbia											4.0							
Washington	14				✓	✓	✓	✓		4		✓						5
Georgia											3.0							
Atlanta	33	(6)		✓				✓		3								3
Maryland											7.0							
Baltimore	8	(2)	✓	(3)	✓	✓	(7)	✓		7		✓	✓	✓				10

Virginia											4.0							
Norfolk	59			√	√			√		3								3
Richmond	38	(2)		√	√		√	(5)		5								5
Average		0.5	0.2	0.7	0.7	0.5	0.5	1.0	0.0	4.0		0.3	0.2	0.2	0.0	0.0	0.0	4.7
SOUTH CENTRAL DIVISION																		
Alabama																		
Birmingham	36			√				(9)		2	2.0							2
Kentucky											4.0							
Louisville	27			√	√		√	√		4								4
Louisiana											7.0							
New Orleans	17	(6)	√	(3)	√	√	√	(5)		7				√			√	9
Tennessee											2.0							
Memphis	40		√		√		√	(5)		4								4
Nashville	56									0					√			1
Texas											1.8							
Dallas	42			√				√		2					√			3
Fort Worth	62			√				√		2								2
Houston	45			√	√			√		3				√	√			5
San Antonio [10]	41									0								0
Average		0.1	0.2	0.7	0.4	0.1	0.3	0.8	0.0	2.7		0.0	0.0	0.2	0.3	0.0	0.1	3.3
WESTERN DIVISION																		
California											5.7							
Los Angeles	10	(6)	√	(3)			√	(5)	√	6			√	√			√	9
Oakland	31		√	√				√	√	4			√					5
San Francisco	12	(2)	√	(3)	√	√	(7)	√		7				√		√	√	10
Colorado											4.0							
Denver	25			√	√	√		(5)		4		√						5
Oregon											5.0							
Portland	24		√	√	√		√	√		5			√	√				7
Utah											1.0							
Salt Lake City	57							√		1								1
Washington											4.0							
Seattle	20	(2)	√	√			(5)	(5)		5				√		√		7
Spokane	67			√			√	√		3								3
Average		0.4	0.6	0.9	0.4	0.3	0.6	1.0	0.3	4.4		0.1	0.4	0.5	0.0	0.3	0.3	5.9
Grand total		40	39	47	49	28	28	66	8	305		10	11	19	12	8	8	373
Per cent of cities		59	57	69	72	41	41	97	12	(11)	(11)	15	16	28	18	12	12	(12)

Explanation of table: States are arranged alphabetically within sections of the country. Rank in population refers to the rank of the cities among the 68 of 100,000 or more population (1920 census). The eight principal types of classes are those referred to throughout this study. Average per State (column 12) indicates the average number of types of atypical classes in the cities of 100,000 population. Average below each group of cities (column 1) the average proportion of cities having classes of the type indicated. Grand total indicates the number of cities offering facilities for the various types, and per cent of cities shows the percentage of the 68 cities offering these facilities.

[8] Parental school only.
[9] Backward classes only.
[10] A hard-of-hearing class is held in night school.
[11] Average types per city, 4.5.
[12] Average types per city, 5.5.
[13] This includes anemic, tubercular undernourished, cardiac.

[2] Sight-saving classes only.
[3] Deaf and hard-of-hearing classes.
[4] Hard-of-hearing classes only.
[5] Mentally defective and backward classes.
[6] Blind and sight-saving classes
[7] Classes and parental school.

All of the cities except San Antonio are represented by at least one of these types of classes. However, even in this case some effort is being made to provide for atypical children through the establishment of a night-school class for the hard of hearing. This is not noted in the table because it is not primarily for children of school age. It will be of interest to compare the data of Table 1 with a somewhat similar tabulation made by Horn [1] in 1924. His study embraced the same cities as the present investigation, but included only five of the eight principal types of children, namely, blind, crippled, deaf, speech

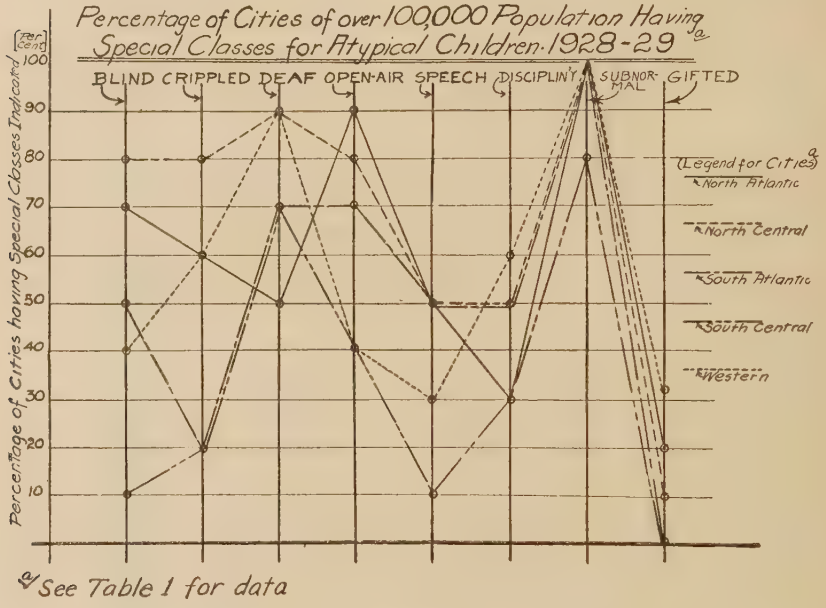

FIGURE 2

defective, and incorrigible. No reference was made to mentally subnormal or gifted children, or to open-air classes. He found a total of 111 classes, or an average of 1.6 per city. Considering only the five groups of Horn's study, the present investigation has disclosed 182 classes, which give an average of 2.7 per city. The number of cities providing for these five types in 1924 and 1929 [2] and the percentages of gain are as follows:

[1] Horn, J. L. The Education of Exceptional Children. New York, The Century Co., 1924.
[2] The years of the Horn and of the present study.

Type	Number of cities		Percentage of gain
	1924	1929	
Blind	12	40	233.3
Crippled	14	39	178.6
Deaf	31	47	51.6
Speech defective	24	28	16.7
Disciplinary	30	28	----------

The increase in the number of cities having classes for the blind and for the crippled is very great; the gain for the deaf is much less but yet considerable. On the other hand, only four more cities have established facilities for speech correction, and apparently no others have inaugurated disciplinary classes. Horn's study revealed 21 cities which made no special provision for the five atypical types which he specified. In 1929 only six of these cities failed to report such provision, and even these (with the exception of one) report other types of atypical classes. There is therefore a considerable improvement in 1929 over the status of 1924.

The "average per State," given in column 12 of Table 1, refers to the average number of types of classes existing in the large cities of each State. It has little significance unless several cities are involved. The record of Ohio is especially noteworthy in this respect. Seven cities are included, and the average is 5.7; California with three cities also has an average of 5.7; NewYork's average for six cities is 5.2; New Jersey's for five is 5; both of the large cities of Michigan have six main types; Minnesota and Missouri with two cities each have averages of 5.5 and 6.5, respectively. When the States with few types are examined, it is found that Texas with four cities has an average of only 1.8 types per city; Pennsylvania with four cities averages only 3.8;[3] Connecticut with three cities has an average of 3.

To what extent do the five geographic sections of the country provide for the blind, the deaf, and the various other types? Classes for the blind or sight defective will be considered first. Eight-tenths of the North Central cities have such classes, seven-tenths of the North Atlantic group, half of the six South Atlantic cities, three of the eight South Central cities, and only one of the nine cities of the South Central Division. The records of individual States are also of interest. All seven of the Massachusetts cities have sight-saving classes; likewise the seven cities of Ohio are provided for this type; five of the six New York cities have such provision. Texas, on the contrary, reports no classes for the blind or sight defective.

[3] It should be added that Pittsburgh sends her blind and deaf children to near-by State institutions. Philadelphia does likewise, but also maintains classes for the partially sighted and deaf in the public schools.

Crippled children have special facilities in the public schools of eight-tenths of the North Central cities, in six-tenths of the North Atlantic and Western, and in two-tenths of the Southern cities. Ohio has classes for the crippled in the seven cities concerned; New Jersey maintains these classes in four of the five cities; Texas reports no facilities for the crippled.

Deaf children are better provided for than most of the other types. The North Atlantic and Western Divisions rank first, with nine-tenths of their cities having classes for these children; the Southern Divisions follow, and the North Atlantic Division comes last, only half of its cities providing for the deaf. The seven Ohio cities have all established classes for the deaf. This State has an enviable record for the three types thus far considered—the blind, the crippled, and and deaf—for it maintains classes for each of these groups in its seven largest cities.

Considerable provision for open-air classes is made in the first three sections, while the South Central and the Western Divisions seem to be lacking in this respect. All of the seven largest cities of Massachusetts have made such provision.

Speech defectives appear to have insufficient attention in all parts of the country. The highest percentage of cities reporting provision for this group is 50 in the first three divisions; only one city out of nine of the South Central and two of eight in the Western Division provide for speech correction.

Disciplinary classes are likewise few in number. The Western Division ranks first, the North Central and South Atlantic are next in order, and the South Central is last. Probably many incorrigible children are sent to State industrial schools. A study as to the relative effectiveness of these State schools as compared with city classes or parental schools would be most enlightening.

Subnormal children have special facilities in all of the 68 cities, except in Nashville and San Antonio. Gifted classes, on the other hand, have been organized in only 8 of the 68 cities—Worcester, Camden, Rochester, Scranton, Cleveland, Dayton, Los Angeles, and Oakland. It is believed that as the necessity for adequate training for these children becomes increasingly evident more cities having sufficient financial resources will establish classes for them.

No particular reference will be made to the "other types" of atypical classes except to point out that, while desirable, they are probably of less importance than the eight types designated as "principal" in Table 1. It is assumed that any efficient school system will endeavor to meet the needs of as many of the 14 groups of atypical children as resources will permit

The percentage of the 68 cities providing for the eight principal types is indicated at the bottom of Table 1. Ninety-seven per cent

of the cities provide for the subnormal, 72 per cent for open-air classes, 69 per cent for the deaf, 59 per cent for the blind, 57 per cent for the crippled, 41 per cent each for speech defectives and the incorrigible, and 12 per cent for the gifted. If each section of the country is ranked according to the percentage of cities providing for each of the eight principal atypical types, the sum of these ranks for each of the sections will furnish an index number; the lowest of these numbers will represent the section which provides most adequately for all types. When this is done it is found that the North Central Division ranks first, with an index number of 15.5. The others in order are: Western, 21; North Atlantic, 21.5; South Atlantic, 25.5; and 36.5 for the South Central Division.

To what extent have the State laws relative to the education of atypical children and the State departments of special education influenced the establishment of special classes in the cities? Examination of Table 3 in Part I shows six States which require classes for children having defective eyesight; the cities of only one of these States have fully complied with this mandate. On the other hand, all of the cities (100,000 population) of Massachusetts and Ohio have these classes, although they are not mandatory. How may this condition be explained? In part, at least, it seems to be due to the effect of State aid. For example, in the Southern and Western Divisions this is not provided except in California, whereas most of the Northern States have such assistance. When Table 1 is examined with reference to the cities having classes for the blind, it is seen that only 7 of the 40 cities having such classes are within the Southern and Western Divisions, the other 33 being in the northern cities.

Of the seven States having mandatory legislation affecting the crippled, four contain several large cities which have not started these classes. Again, it is noted in Part I, Table 7, that no State aid for the crippled is given in the South or West except in California, and that there are correspondingly fewer cities providing for this type in those sections. Table 1, Part II, shows that only 8 of the southern cities have these classes, whereas the other sections account for 31.

Classes for the deaf are required in 5 States and are permitted in 13 others. Nine of these are in the North Central Division Nine-tenths of the largest cities in this division have such facilities. In the North Atlantic group, where all of the legislation for the deaf is mandatory, only one-half of the large cities have these classes. Both of these divisions supply State aid in practically every case. The Southern and Western groups, with very little legislation affecting the deaf, account for 17 of the total of 47 cities having such classes. This would tend to show that the largest cities have established these facilities in many instances without specific State encouragement.

Cities having open-air classes are about as numerous as those having classes for the deaf and yet there are fewer enactments referring to this type and only three cases of State aid.

Speech classes are mandatory in three States and permitted in seven others. Of the eight cities of over 100,000 population in the former three States, only two have provided for speech defectives. State aid, which is given in three instances, seems also to have had little effect in provision for this group in the large cities.

Disciplinary classes must be established in two States, and yet Table 1 reveals three of the cities of one of these States and the only city of 100,000 population in the other without such facilities. The 28 cases of provision for incorrigible children are fairly well distributed among the cities, with no apparent relation to the specific legal enactments.

Classes for subnormal children have been reported by all of the large cities except Nashville and San Antonio. Laws refer directly to these classes in only 15 of the 31 States.

Gifted classes are established in only eight cities. Three of these cities are in States having legislation relating to this subject. In one State, which is the only one making these classes mandatory, such classes have been established in merely a single city, in spite of the fact that some State aid is provided.

Reviewing the relationship between legislation and the inauguration of atypical classes, it appears, first, that State laws relative to the establishment of special classes are not always being enforced; second, that mere State requirement or permission is not sufficient to bring about the establishment of atypical classes in the large cities. The provision of State aid appears frequently to be one of the needed incentives, though even this may not be sufficient to bring about the desired results. It should be observed that the North Central Division, which provides relatively the most State assistance, stands first in provision for atypical children.

State directors of special education have accomplished much in the encouragement and direction of the training of exceptional children. The presence of classes for blind, crippled, and deaf children in each of the seven cities (100,000 population) of Ohio is probably due in large part to the interest and competent direction manifested in that State by the bureau of special education. Other instances could be cited for the nine other States maintaining special education departments. Their helpfulness in establishing standards and in directing and aiding in the establishment of atypical classes, especially in the smaller communities, is of great importance to the State.

B. Trend of Establishment of Special Classes

When were the various types of atypical classes first organized in the 68 cities included in this study? What has been their rate of growth in the country as a whole and in each of the five main subdivisions considered separately? Can anything be said concerning their probable development in the future? In the following discussion we shall attempt to answer these questions.

Fifty-two of the sixty-eight cities submitted data as to the date of establishment of their special classes. (See Table 2.) These were not complete in all instances, but it was thought best to include data from the entire 52, in order that they might be on record. Comparision between Tables 1 and 2 will show the classes for which no data were received. Table 2 may therefore be regarded as a fairly comprehensive picture of the development by years of special education facilities in 52 of the largest cities of the United States. The cities have been arranged alphabetically for convenient reference.

TABLE 2.—*Year of establishment of atypical classes in public schools of 52 cities of over 100,000 population* [1]

Cities	Anemic	Blind	Sight saving	Cardiac	Crippled	Deaf	Hard of hearing	Home bound	Hospital	Open-air	Speech	Tubercular	Disciplinary	Parental	Probation	Mentally defective	Backward	Prevocational	Gifted	Foreigners	Restoration
Akron			1924		1921	1919				1916						1920					
Albany			1913																		
Atlanta		1923	1926			1918										[2] 1917					
Baltimore			1926		1913					1913			1909	1904		1922					
Birmingham						1924															
Boston			1913			1869	1869				1912		1915			1899					
Bridgeport					1924											1910					
Buffalo			1917		1912					1910	1922	1912			[3] 1910	[4] 1909					
Cambridge			1916		1929		1923			1910	1915					1914				1916	
Chicago	1902	1878	1912		1901	1891							1906		1896	1898					
Cincinnati					1915					1922				1925		1909					
Cleveland			1913		1910	1893					1918		1921			1904		1924			
Columbus			1924	1923	1923		1923			1923	1928		1908			1910	1910				1910
Dayton			1922		1917	1899										1911	1920	[5] 1910	1910		
Denver						1925				1921	1917					1909	1909			1925	
Des Moines					1914		1926			1914	1924					1914					
Detroit	1914	1912	1915	1923	1910	1898	1898				1910	1914				1903	1914				
Fall River			1920				1923				1916	1918				1913	1908				
Fort Worth						1924															
Grand Rapids					1920	1901															
Hartford										1910											
Indianapolis					1925					1914							1926				
Jersey City	1914	1911	1927		1921		1912		1921		1917		1906			1911	1914			1925	
Kansas City, Mo					1910	1914	1914			1914			1916	[6] 1908		1910		1910			
Los Angeles		1918	1924		1920	1899	1925						1899			1913	1926		1916		[7] 1908
Memphis										1918			1926				1921				
Milwaukee		1907	1907		1915	1885		1915	1928	1909						1909	1908	1921		1918	
Minneapolis		1919	1919		1920	1915				1913	1917	1921				1912					
Nashville																		1928			
Newark		1910	1910		1921	1910					1916										
New Bedford			1916						1915	1915						1909					
New Orleans	1926	1918	1921		1921	1911	1928		1923		1922		1913			1922	1913				1927
New York		1909	1915	1918	1906	1908		1915	1921	1904	1916	1904	1905	1857		1900					
Oakland					1923	1891										1911					
Omaha											1920					1917					
Paterson					1925					1919			1911								
Philadelphia	1913		1919	1913	1913	1920	1920			1913	1921	1911	1898	1926		1899				1917	1921
Portland																1911					
Providence											1925							1926			
Reading																		1925			
Richmond										1915			1912			1915					
Rochester	1909		1919		1920		1913		1919	1909	1913	1912	1904		1920	1906		1915	1919		

Scranton																1915					
Seattle			1920		1912				1912					[8]1907	1915	1910	1920				
Spokane						1916										1912					
Springfield			1926			1928				1911						1903	1894			1917	
Syracuse			1921			1919				1911						1915					
Toledo		1914			1919	1911										1907					
Trenton										1914						1912					
Washington	1922	1901				1901				1922	1922	1916	1906			1906				1914	
Worcester						1927															
Youngstown																1920					
Total	7	12	26	4	28	26	12	2	7	24	19	8	16	6	4	40	13	8	3	7	4

[1] The data of this table have been secured from questionnaires sent to authorities of the 68 cities of over 100,000 population during March, 1929.
[2] 1917, elementary classes; 1925, junior high-school classes.
[3] 1910, probation classes; 1923, court classes.
[4] 1909, classes; 1926, center.
[5] 1910, boys; 1922, girls.
[6] 1908, white boys; 1912, girls; 1925, colored boys.
[7] 1908, adjustment B, special methods only; 1918, adjustment A, special methods and materials; adjustment C, 1926, for nonreaders only.
[8] 1907, boys; 1913, girls.

When the dates of Table 2 are examined, it is found that 7 of the various types of classes were first established in cities of the North Atlantic States, 7 others in the North Central cities, and 1 each in the Southern and Western Divisions. This indicates a tardiness in the last two divisions in the inauguration of special education facilities. When we inquire into the first type of class started in each division according to the city reports, we find that in the North Atlantic group of cities the parental school established in New York City in 1857 was the first effort on the part of a large city school system to cope with the problem of the atypical child. Similar dates in the other sections were: North Central, Chicago classes for the blind, 1878; Southern, blind and deaf classes in Washington, D. C., in 1901; Western, Oakland classes for the deaf, 1891.

What uniformity, if any, has existed in the order of establishment of facilities among the cities listed in Table 2? Of the 52 cities reporting, classes for mentally subnormal children were the first type inaugurated in 19 instances; classes for the deaf and hard of hearing were first in 16 cases; classes and schools for the incorrigible in 10; open-air classes in 7; provision for defective sight in 7; and classes for crippled, defective speech, and prevocational work each in one instance.[4] Thus 37 per cent of the 52 cities established subnormal classes first; 31 per cent provided first for the deaf; 19 per cent chose disciplinary classes; 13 per cent started with sight defectives, and the same percentage with open-air classes.

This trend of development of special classes may be seen by reference to Table 3, which shows the number of cities starting the various types of classes during 5-year intervals, from the year 1890 to the present time. The interval 1910–1914 accounts for the greatest number of initial classes, namely, for 77, or 27.8 per cent of the entire 277 provisions reported. During the next decade many classes were established, but since that time the rate of organization as reported has decreased considerably. It is significant to note that the greatest tendency toward special classes in the large cities occurred prior to the entry of the United States into the war, whereas, as previously noted in Part I, Chapter I, the maximum development of legislative enactments relative to atypical classes has occurred subsequent to the war. This clearly demonstrates that the largest cities have not required the urge of legislation in order to inaugurate these classes.

[4] The sum is more than 52, because where several types were started in a city in the same year they were all assigned to first place.

TABLE 3.—*Distribution by years of establishment of provisions made for atypical classes in public schools of 52 cities of over 100,000 population* [1]

Interval	Total	Anæmic	Blind	Sight saving	Cardiac	Crippled	Deaf	Hard of hearing	Epileptic	Home-bound	Hospital	Open air	Speech	Tubercular	Disciplinary	Parental	Probation	Mentally defective	Backward	Prevocational	Gifted	Foreigners	Restoration
Before 1890	5		1				2	1								1							
1890–1894	4						3												1				
1895–1899	10						3	1							2		1	3					
1900–1904	13	1	1			1	2					1		1	1	1		4					
1905–1909	30	1	2	1		1	1					2			6	2		10	3				1
1910–1914	77	3	4	5	1	8	4	3	1		1	12	3	4	3		1	15	4	2	1	1	1
1915–1919	54		3	8	1	4	5			2	2	5	8	2	2		1	4		1	2	4	
1920–1924	56	1	1	8	2	11	3	4			3	4	6	1	1		1	4	3	2			1
1925–1929	28	1		4		3	3	3			1		2		1	2			2	3		2	1
Total	277	7	12	26	4	28	26	12	1	2	7	24	19	8	16	6	4	40	13	8	3	7	4

Read table as follows: Of the 52 cities submitting data, 5 reported classes established before 1890; 4 types were started during the interval 1890–1894, etc. One provision for anæmic children is reported for the period 1900–1904; one was made during 1905–1909, etc.

[1] These data were secured from questionnaires sent to directors of special classes and other officials of the 68 cities of 100,000 population during March, 1929.

What has been the growth in the establishment of the different types of classes? Table 3 shows at once that classes for the deaf have had a steady development throughout the period represented. New provision for the blind shows a decrease since 1914, but with this is noted a decided increase in sight-saving classes. It appears that the cities are realizing the importance of prevention in sight-saving work. The decided development of classes for the crippled shows the great interest manifested in that group of handicapped children. This will no doubt continue because of the many organiza-

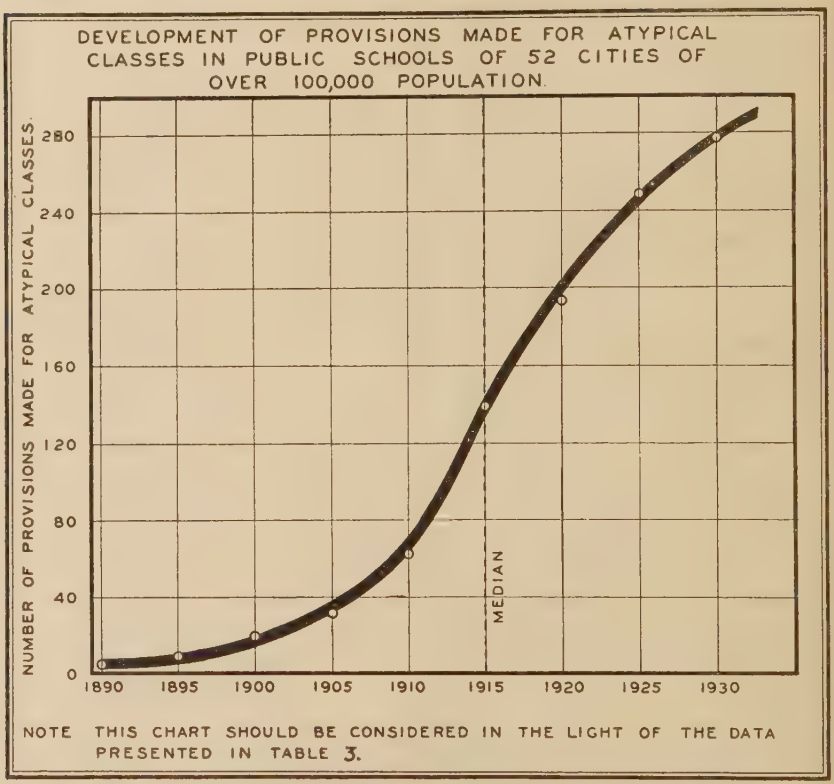

FIGURE 3

tions working in their behalf. The establishment of open-air classes seems to show no special gain since 1914. On the other hand, the needs of speech defectives have had steady recognition since 1910, and the outlook for this group seems promising. Disciplinary classes reached their peak prior to the war and have declined in rate of growth since that time. Classes for the mentally defective have been established in 66 of the 68 cities of 100,000 population; they received an earlier start than any other type except the deaf. In recent years there has been an additional tendency toward the establishment of classes for the backward.

TABLE 4.—*Enrollment in atypical classes of 42 cities of over 100,000 population, 1927–28* [1]

Cities	Principal types																Other types							Grand total	26÷17
	Blind	Sight saving	Crippled	Deaf	Hard of hearing	Open air	Anæmic	Cardiac	Tubercular	Disciplinary	Parental	Mentally defective	Backward	Gifted	Total	Entire school system	16÷17	Foreigners	Home bound	Hospital	Prevocational	Probation	Restoration	Speech		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
NORTH ATLANTIC CITIES																										
Albany		11		14		101						280			406	13,000	0.031								406	0.031
Boston		136	[2] 214	[3] 149		([4])				81		1,917			2,497	164,714	.015			([5])		X		1,824		
Bridgeport			17									334			351	20,977	.017								351	.017
Buffalo		41	167			111			([6])			2,024			2,343	85,874	.027					436		1,797	4,576	.053
Cambridge		18	8		52	175						118			371	17,023	.022	28	([5])					X		
Fall River		23			121				39			463	536		1,182	18,741	.063							140	1,322	.071
Hartford						227						87			314	[7] 28,569	.011								314	.011
Jersey City	8	10	138		23		95			29		220	239		762	50,181	.015	18						113	875	.017
Lowell		13				44						85	168		310	15,335	.020								310	.020
Newark	19	31	194	[3] 78			40		39	142		769			1,312	[7] 86,248	.015						232	598	2,142	.025
New Bedford		31	24			17						147			219	[7] 17,374	.013			([5])					219	.013
New York	57	1,280	[8] 2,616	429		3,871		881	733	647	447	7,825			18,786	1,016,740	.019		485	25				[9] 15,748	35,044	.034
Philadelphia		158	541	[3] 124		251	(6)	23	129	790	35	6,107			8,158	[7] 298,864	.027	237		([5])		X	734	4,659		
Reading						40						80			120	18,204	.007				18				138	.008
Springfield		12			([10])	93						283	76		464	27,589	.017	103		X						
Syracuse		31		14		144						57	([11])		246	32,483	.008								246	.008
Trenton						41						300			341	[7] 19,937	.017								341	.017
Average																	.020									

[1] All of the data of this table have been obtained by questionnaires and personal inquiries sent to officials of the cities.
[2] Hospital.
[3] Deaf and hard of hearing.
[4] Provided for in regular rooms.
[5] Crippled.
[6] Noted under open air.
[7] Data of previous year.
[8] Does not include over 100 crippled in high schools.
[9] For 1926–27.
[10] Organized September, 1928.
[11] Not separated in reports.

TABLE 4.—*Enrollment in atypical classes of 42 cities of over 100,000 population, 1927–28*—Continued

Cities	Principal types																Other types										
	Blind	Sight saving	Crippled	Deaf	Hard of hearing	Open air	Anæmic	Cardiac	Tubercular	Disciplinary	Parental	Mentally defective	Backward	Gifted	Total	Entire school system	16÷17	Foreigners	Home bound	Hospital	Prevocational	Probation	Restoration	Speech	Grand total	26÷17
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
NORTH CENTRAL CITIES																										
Akron		19	60	20		360						152			611	[7] 41,664	.015			X	X					
Chicago	48	181	1,231	356			1,628			232		3,790			7,466	520,562	.014					587			8,053	.015
Cincinnati		80	181	32		104					129	682			1,208	[7] 54,972	.022		(5)						1,208	.022
Cleveland	[12] 275		152	145		745				765		1,500	3,494	650	7,726	[7] 141,537	.055	23			2,169			2,1741	2,092	.085
Columbus		28	166		10	150		(13)		195		180	180		909	40,796	.022		10				180	(11)	1,099	.027
Dayton		31	41	32								80	440	22	646	[7] 25,478	.025				99				745	.029
Des Moines		15	(6)	19	43	83						64			224	30,306	.007		(13)		(11)			129	353	.012
Detroit	[12] 325		584	[3] 262			2,227	108	(14)	390		4,466	409		8,771	[7] 211,807	.041		(5)					5,060	13,831	.065
Grand Rapids	[12] 110		73	52		264				380		393			1,272	28,985	.044						X	X		
Indianapolis			52			244						189	81		566	54,157	.010								566	.010
Kansas City, Mo			96	[3] 46		567				27	403	570			1,709	69,649	.025			(5)	716				2,425	.035
Milwaukee	[12] 50		141	100		237						147	(15)		675	73,271	.009	140	(5)	(5)	1,233			806	2,854	.039
Minneapolis	[12] 77		188	75		93			146			901			1,480	[7] 82,329	.018							2,776	4,256	.052
Omaha												200			200	40,372	.005							2,493	2,693	.067
St. Louis		60	236	71	16	393			19		270	623			1,688	[7] 97,530	.017			122		66		713	2,589	.027
Toledo	8		196	28								582			814	[7] 48,333	.017								814	.017
Youngstown	9	51	37	[3] 8		52						[16] 529			686	[7] 30,708	.022	29							715	.023
Average																	.022									
SOUTHERN CITIES																										
Atlanta	6	8		5								498			517	60,716	.009								517	.009
Baltimore		26	233	22		382		16		[17] 131		1,097			1,907	104,377	.018	82	(5)	(5)				X		
Fort Worth				14								20			34	31,939	.001								34	.001
Richmond		19		9		404				53		[16] 256			741	[7] 30,980	.023								713	.023
Washington	22			69		(14)	45		125	244		360			865	77,993	.011	274						3,088	4,227	
Average																	.012									

WESTERN CITIES																													
Denver				18		25						[16] 442			485	43, 940	.011	155						1, 133	1, 773	.040
Los Angeles	29	80	600	123	123					540		2, 268	1, 658	450	5, 871	355, 735	.017		(5)	(5)			3, 440		9, 311	.026
Seattle		104	(18)	65							180	1, 373	150		1, 872	[7] 61, 782	.030			(5)		52			1, 924	.031
Average																	.019												
Total enrollment	1, 043	2, 497	8, 186	2, 379	388	9, 218	4, 035	1, 028	1, 230	4, 646	1, 464	42, 458	7, 431	1, 122	87, 125	4, 291, 771	.020												
Per cent	1. 2	2. 9	9. 4	2. 7	0. 4	10. 6	4. 6	1. 2	1. 4	5. 3	1. 7	48. 8	8. 5	1. 3	100. 0														

[3] Deaf and hard of hearing.
[5] Crippled.
[6] Noted under open air.
[7] Data of previous year.
[12] Blind and sight saving.
[13] Included in data for crippled.
[14] Included in "anæmic."
[15] Classes in all schools.
[16] Mentally defective and backward.
[17] Disciplinary and parental.
[18] Variable.

NOTE.—Cities are arranged alphabetically within sections of the country. Column 17 shows the total enrollment in the entire school system for 1927–28 unless otherwise indicated. Column 18 is the ratio of atypical class enrollment to total enrollment of school system. Column 26 is the grand total of columns 2 to 15, and 19 to 25, inclusive. Column 27 is the ratio of column 26 to column 17.

Read table as follows: Albany enrolled 11 sight-saving pupils, 14 deaf pupils, etc. The total atypical pupils of all types enrolled in special classes in Albany in 1927–28 was 406. This was 0.031 of the total school enrollment of 13,000. A cross indicates missing data.

C. Analysis of Enrollment in Special Classes and Comparison with Suggested Standards

(1) *Enrollment in special classes.*—This analysis is presented in Table 4, which contains data from 42 cities of over 100,000 population for the school year 1927–28. It will be noted that a complete analysis has been given only of what are referred to as the "principal types." There are several reasons for thus separating the table. First, these types have been kept separate throughout the study; second, the the laws of the States refer directly to them rather than to the other types; third, there is a possiblity of misinterpreting data referring to the "other types." Statistics of speech classes have not been included in the first group because at times they apparently represented treatment in clinics, and in other instances they indicated class enrollment; they have therefore been separated. The data of columns 2 to 15 are complete, but there are a few omissions in columns 19 to 25, indicated by an "X." Columns 26 and 27 give totals for those cities in which the data were complete for all types. It is believed that an entirely fair comparison may be made among the cities and sections of the country by considering primarily the "principal types" of classes. These at least should be established in every large city. The total enrollment in these classes in the 42 cities was 87,125, which represented 2 per cent of the 4,291,771 pupils in the school systems of those cities. This ratio ranged from only 1 per thousand in Fort Worth to 63 per thousand in Fall River.

The ratio in the North Atlantic cities ranged from 0.007 in Reading to 0.063 in Fall River. New York City practically reaches the country average, having 19 children in atypical classes for every thousand enrolled in the schools; Philadelphia was somewhat higher, with 27 per thousand; Albany and Buffalo likewise have high ratios, with 0.031 and 0.027, respectively. Six of the seventeen North Atlantic cities equal or exceed the country ratio of atypical class to total enrollment.

The range in the North Central cities extended from 0.005 in Omaha to 0.055 in Cleveland. Detroit and Cleveland, the fourth and fifth cities in population, have the high ratios of 0.041 and 0.055, respectively; Chicago, the second city in size of the United States, on the other hand, reported only 14 exceptional children per thousand, which is considerably less than the average of 0.020 for all the cities. Eight cities in this section equal or exceed the country average. Five of them are located in Ohio.

The number of southern and western cities submitting complete reports is relatively few, and therefore analyses based on these small numbers will be correspondingly less accurate than those of the larger divisions. Fort Worth in the Southern Division has the smallest number of pupils per 1,000 population in atypical classes. Richmond exceeded the cities' ratio, with an average of 0.023; the four other

southern cities reporting showed enrollments below the country average.

Column 26 of Table 4 differs from column 17 considerably when the number of speech defectives have been added. Some cities which have low rates when considering the "principal types" assume much larger figures when the speech data have been considered. However, it has been thought best, because of the various bases on which this latter material is reported, to present it as in Table 4. The reader may then interpret the data as he desires.

In order to note the effect, if any, of the size of the city upon atypical class enrollment, the cities have been aranged in Table 5 according to population, the largest city, New York, being first. The average ratio of atypical class enrollment to total enrollment for the 42 cities is 0.020. The first 10 cities have an average ratio of 0.025; the next 10, 0.017; the next 10, 0.015; and the final group of 12, 0.022. It is thus seen that the two middle groups of cities fall somewhat below the first and last groups.

Illustrating the probable influence of the State authorities on local activities, it may be seen from Table 5 that five of the seven Ohio cities of over 100,000 population have ratios equal to or higher than the country average. Furthermore, these 5 cities extend through the entire population range, their ranks among the 68 cities being 5, 16, 29, 43, and 50, respectively. Population, therefore, seems to have some effect, but other factors, such as State aid and direction, are also operative in determining how extensive is the provision made for atypical pupils.

TABLE 5.—*Ratio of enrollment in atypical classes to total school enrollment in 42 cities of over 100,000 population, 1927–28* [1]

Cities (in order of population)	Ratio	Cities (in order of population)	Ratio
1. New York	0.019	21. Toledo	0.017
2. Chicago	.014	22. Columbus [2]	.022
3. Philadelphia [2]	.027	23. Akron	.015
4. Detroit [2]	.041	24. Atlanta	.009
5. Cleveland [2]	.055	25. Omaha	.005
6. St. Louis	.017	26. Syracuse	.008
7. Boston	.015	27. Richmond [2]	.023
8. Baltimore	.018	28. Dayton [2]	.025
9. Los Angeles	.017	29. Bridgeport	.017
10. Buffalo [2]	.027	30. Hartford	.011
Average	.025	Average	.015
11. Milwaukee	.009	31. Grand Rapids [2]	.044
12. Washington	.011	32. Youngstown [2]	.022
13. Newark	.015	33. Springfield	.017
14. Cincinnati [2]	.022	34. Des Moines	.007
15. Minneapolis	.018	35. New Bedford	.013
16. Kansas City, Mo. [2]	.025	36. Fall River [2]	.063
17. Seattle [2]	.030	37. Trenton	.017
18. Indianapolis	.010	38. Albany [2]	.031
19. Jersey City	.015	39. Lowell [2]	.020
20. Denver	.011	40. Fort Worth	.001
Average	.017	41. Cambridge [2]	.022
		42. Reading	.007
		Average	.022
		General average	.020

[1] The data of this table have been obtained from column 18 of Table 4.
[2] Indicates those cities exceeding the general average of 0.020 for the entire group of 42 cities.

What percentage of all atypical pupils are in classes for the blind, for the deaf, etc.? This material is given at the end of Table 4. Over one-half (57.3 per cent) of the total enrollment in special classes represents the mentally subnormal; the open-air groups (open air, anæmic, cardiac, tubercular) follow with 17.8 per cent; the crippled,

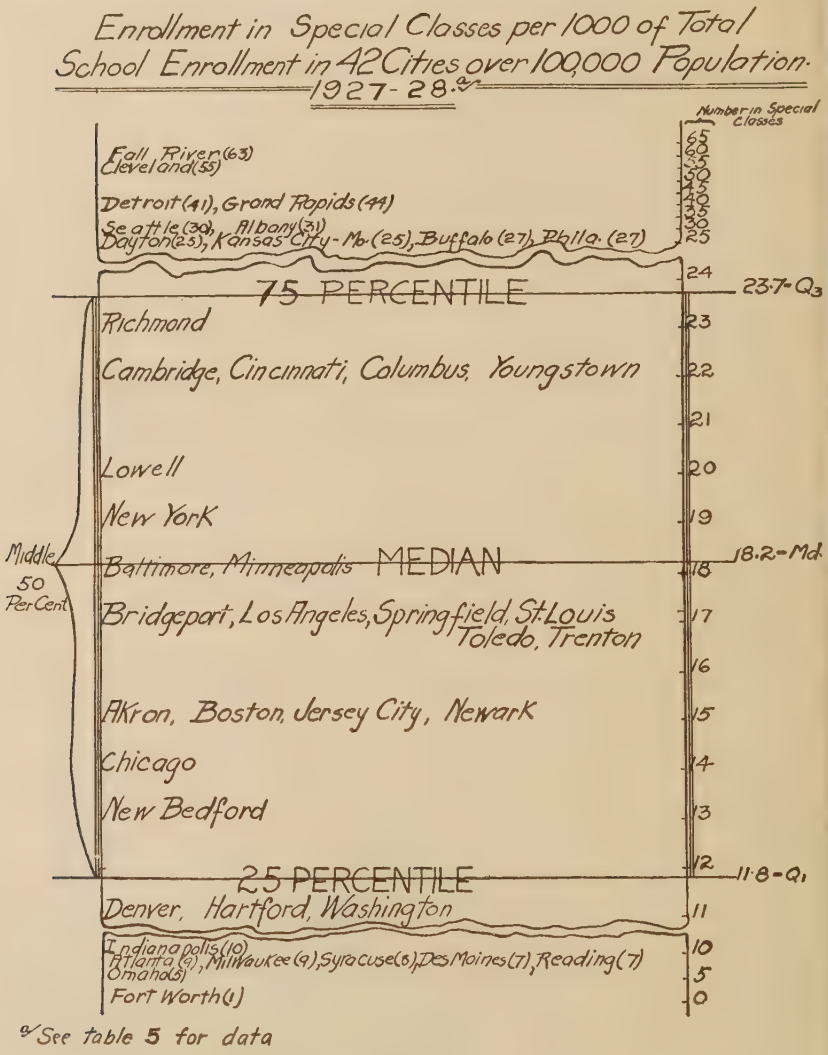

FIGURE 4

9.4 per cent; the incorrigible, 7.0 per cent; the sight defective, 4.1 per cent; the hard of hearing, 3.1 per cent; the gifted, 1.3 per cent. When we compare the percentage of subnormal with the gifted, we have a striking illustration of the absolute inattention paid to the latter group. About three times as many crippled children are pro-

vided for as those having defective hearing, whereas investigations seem to indicate that there are actually many more children of the latter type than of the former. Likewise, the enrollment of sight defectives is somewhat greater than that of the deaf and hard of hearing, although more of the latter have been found among school children than of the former. Of course, the enrollment for all of the groups is too small, and facilities should be extended as rapidly as possible. But the number of children within any group of classes should be based on their relative frequency in the community, and not on other factors which are irrelevant. The extent to which this has been done will be developed in more detail in the following section.

(2) *Comparison between special class enrollment and probable number of atypical children.*—May one form any judgment as to the extent to which the special classes of the city schools are providing for the total number of children requiring this training? This can be done for those groups where surveys have indicated the relative number in a community. It must be understood, however, that the ratio obtained by a survey in one city does not necessarily hold for other localities. A number of surveys, nevertheless, will serve as criteria for purposes of comparison. Table 6 presents this material for five atypical groups for which studies of incidence have been made. The bases of the ratios suggested for the partially sighted, the crippled, the deaf or hard of hearing, speech defectives, and the mentally subnormal are given in the following paragraphs.

Five cities having sight-saving classes reported to the writer that they had made studies of the number of partially sighted children requiring special training. The average of their data indicated one child of this type in 500, or 0.002. The director of the Department of Special Education of Ohio, in estimating the number of crippled children in that State, quotes the survey of crippled children made in Cleveland in 1918, in which 4,186 cripples were found in a population of 674,000, or 6 per thousand.[5] Approximately 25 per cent of these, or 1.5 per thousand of general population, were children of school age. This represents about 10 crippled children per thousand attending school. If we accept the opinion of the Ohio director of special education based on her experience, that approximately 40 per cent of the crippled children require treatment in special classes, then the above number becomes 4 per thousand.

[5] Hadley, H. C. Educating Crippled Children in Ohio. State Department of Education, Columbus, Ohio, 1927. Pp. 34, 35.

TABLE 6.—*Comparison between probable number of atypical children and actual enrollment in special classes of 48 cities of over 100,000 population, 1927–28* [1]

Cities	Sight saving	Crippled	Deaf and hard of hearing	Speech defective	Mentally subnormal
Estimated ratio of atypical children to total enrollment	0.0020	0.0040	0.0200	0.030	0.055
Ratio of atypical class enrollment to total enrollment:					
North Atlantic Cities					
Albany	0.0008		0.0011		0.022
Boston	.0008	0.0013	.0009	0.011	.012
Bridgeport		.0008			.016
Buffalo	.0005	.0020		.021	.023
Cambridge	.0011	.0005	.0031		.006
Fall River	.0012		.0065	.008	.053
Hartford					.003
Jersey City	.0002	.0027	.0005	.002	.009
Lowell	.0009				.017
Newark	.0004	.0023	.0009	.007	.009
New Bedford	.0018	.0014			.008
New York	.0013	.0026	.0004	.016	.008
Paterson		.0012			.009
Philadelphia	.0005	.0018	.0004	.016	.020
Reading					.004
Springfield	.0004				.010
Syracuse	.0010		.0004		[2]
Trenton					.015
Worcester	.0008		.0002		.012
Average	.0008	.0017	.0014	.012	.014
North Central Cities					
Akron	.0005	.0014	.0005		.004
Chicago	.0003	.0024	.0007		.007
Cincinnati	.0015	.0033	.0006		.012
Cleveland	[3] .0020	.0011	.0010	.015	.035
Columbus	.0007	[3] .0041	.0002		.009
Dayton	.0012	.0016	.0013		.020
Des Moines	.0005		.0020	.004	.002
Detroit	.0015	.0028	.0012	.024	.021
Grand Rapids	[3] .0038	.0025	.0018		.014
Indianapolis		.0010			.005
Kansas City, Mo		.0014	.0007		.008
Milwaukee	.0007	.0019	.0014	.011	.002
Minneapolis	.0009	.0023	.0009	[3] .034	.011
Omaha				[3] .062	.005
St. Louis	.0006	.0024	.0009	.007	.006
Toledo		[3] .0041	.0006		.012
Youngstown	.0017	.0012	.0003		.017
Average	.0012	.0022	.0009	.022	.011
Southern Cities					
Atlanta	.0001		.0001		.008
Baltimore	.0003	.0022	.0002		.011
Fort Worth			.0004		.001
Memphis					.003
New Orleans	.0009	.0010			.005
Richmond					.007
Washington			.0009	[3] .040	.005
Average	.0004	.0016	.0004	.040	.004
Western Cities					
Denver			.0004	.026	.010
Los Angeles	.0002	.0017	.0007		.006
Oakland		.0003	.0003		.008
Seattle	.0017		.0011		.025
Spokane	.0009				.005
Average	.0009	.0010	.0006	.026	.011
General average	.0009	.0019	.0010	.019	.008

[1] The data of this table have been obtained from Table 4 by comparison between atypical and total enrollment.

[2] This city does not give separate data for the backward classes.

[3] Indicates those cities exceeding suggested standard at top of column.

Explanation of table: Cities are arranged alphabetically within sections of the country. The bases for the estimates at top of table are given in the text.

Read table as follows: In Albany, 0.0008 of the total school enrollment during 1927–28 was in sight-saving classes. This amount should be compared with the standard of 0.0020.

Various estimates have been made as to the prevalence of deafness among school children. Berry believes from his studies that the hearing of 2 to 5 per cent is seriously impaired.[6] A survey of 50 schools in San Francisco in November, 1927, showed that 1.6 per cent had a loss of nine or more sensation units.[7] Other estimates have been made extending up to 20 per cent. As this latter value seems to be an impossible goal at present, the approximate minimum of 2 per cent has been suggested in Table 6 as a tentative standard.

The number of speech defectives in a community has been found by various investigators to be quite different. Four cities which sent data to the writer on this point suggested ratios varying from 3 to 10 per cent based on their observations. A study of 9,000 physically handicapped children in California by the State department of special education during 1927–28 revealed 40 per cent having speech difficulties.[7] Three per cent, the minimum of the several estimates, has been taken as a tentative standard for speech defectives in Table 6.

Many investigators have endeavored to determine the relative percentages of mental subnormality existing among school children. As a result of his study of many surveys made in this field, Terman concludes that "on an average two or three children out of a hundred are so poorly endowed * * * as to render their social competency a matter of extreme doubt." [8] Wallin estimates that about one-half of 1 per cent of elementary pupils are low-grade mental defectives and should be in institutions, that approximately 1 per cent are feeble-minded, and that 3 to 5 per cent belong in the "backward" classes.[9] In Massachusetts, of 28,000 children examined by the State traveling clinics, 18,000 pupils, or about 1½ per cent of the school population, were found to be three or more years mentally retarded. Considering all preceding data, it appears that 1½ per cent of feeble-mindedness among children of school age may be taken as a conservative estimate. To this amount has been added 4 per cent for the backward (note Wallin's estimate), giving a ratio, as suggested in Table 6, of 5½ per cent for the mentally subnormal.

How do the 48 cities listed in Table 6 compare with the proposed ratios of incidence? As a group they appear to be caring for 45 per cent of the sight defectives (0.0009 ÷ 0.0020), 48 per cent of the crippled, 5 per cent of those having defective hearing, 63 per cent of speech defectives, and 15 per cent of the mentally subnormal. This last percentage represents only one-half of the lowest grade of mental defectives of school age in the cities.

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[6] Berry, C. S. The Education of Handicapped Children in Michigan. Lansing, Mich., Superintendent of Public Instruction, 1926. Bulletin No. 11, p. 11.

[7] Report of the Director of Special Education of California, 1927–28.

[8] Terman, L. M. The Intelligence of School Children. New York, Houghton Mifflin Co., 1918. p. 126.

[9] Wallin, J. E.W. The Education of Handicapped Children, pp. 143, 151.

Sight-saving classes in the North Atlantic cities enrolled 40 per cent (0.0008 ÷ 0.0020) of the estimated number of children requiring this instruction. Corresponding percentages for the other sections are: North Central, 60 per cent; Southern, 20 per cent; Western, 45 per cent. Only two cities, Cleveland and Grand Rapids, equaled the suggested enrollment ratio for sight-saving classes. Both of these cities are in the North Central Division.

Classes for crippled children in the North Atlantic cities enrolled 43 per cent (0.0017 ÷ 0.0040) of the estimated number of these children needing special instruction. Percentages for the other sections are: North Central, 55 per cent; Southern, 40 per cent; Western, 25 per cent. Again, as with sight-saving classes, it is noted that two cities—Columbus and Toledo, both in the North Central group—have exceeded the suggested standard.

Classes for the deaf and hard of hearing in the North Atlantic group enrolled 7 per cent (0.0014 ÷ 0.0200) of the estimated number requiring this instruction. Similar percentages for the other sections are: North Central, 4½ per cent; Southern, 2 per cent; Western, 3 per cent. Fall River had the highest ratio of any of the cities, but even this represented only 32 per cent of the required facilities.

Speech defectives received special instruction in the six North Atlantic cities reporting to the extent of 40 per cent of the estimated number (0.012 ÷ 0.030). Percentages for the other sections are: North Central, 73 per cent; Southern, 133 per cent for Washington, the only city reporting; Western, 87 per cent for Denver, the only respondent city. Of the 14 cities submitting data on speech defectives, 3 (Minneapolis, Omaha, and Washington) exceeded the suggested ratio of 0.030. Two of these cities are in the North Central group and the other in the Southern section.

Data for the mentally subnormal are given for all of the 48 cities of Table 6 except Syracuse, which does not separate the backward pupils in reports. Classes for these children in the North Atlantic cities enrolled 25 per cent (0.014 ÷ 0.055) of the estimated number of such defectives. Percentages for the other sections are: North Central, 20 per cent; Southern, 7 per cent; Western, 15 per cent. None of the cities equaled the proposed standard of 0.055, although Fall River, with a ratio of 0.053, almost reached this value.

Considering all cities and all types of classes given in Table 6, we note that seven cities exceeded the suggested standard ratios. Six of these were located in the North Central section and one in the Southern. If each section is ranked for each type of class according to the ratio of pupils enrolled to those in the community and if these ranks are then averaged, it is found that the North Central cities stand first, the North Atlantic second, Western third, and Southern fourth.

The next section of this chapter will conclude the study of enrollment in special classes with an analysis of the number enrolled per class with relation to existing standards and legal restrictions.

(3) *Average number of atypical pupils per class.*—This information is given in Table 7 for 38 cities submitting comparable data. The arrangement is similar to that of Table 4. The total number of classes is given for the "principal types." This part of the table is complete. There are a few omissions of data, however, in columns 17 to 23, which are indicated by the mark X. No special analysis is made of total number of classes, as the previous study of enrollment and the following discussion of number per class involve that material. The fact that enrollments for blind and sight-saving classes, for deaf and hard of hearing, and for mentally defective and backward have at times been given as one sum should be kept in mind when interpreting the data.

TABLE 7.—*Number of atypical classes and enrollment per class in 38 cities of over 100,000 population, 1927–28* [1]

	Principal types																							
	Blind		Sight saving		Crippled		Deaf		Hard of hearing		Open air		Anæmic		Cardiac		Tubercular		Disciplinary		Parental			
1	2		3		4		5		6		7		8		9		10		11		12			
NORTH ATLANTIC CITIES																								
Albany			1	11			2	7			4	25												
Boston			10	14	(2)		16	[3] 9			(4)									4	20			
Bridgeport					1	17																		
Buffalo			3	14	8	21					4	28					(5)							
Hartford											8	28												
Jersey City	1	8	1	10	10	14			3	8			5	19						1	29			
Lowell			1	13							2	22												
Newark	3	6	2	15	12	16	12	[3] 7					2	20			2	20	12	12				
New Bedford			2	16	3	8					2	9												
New York	7	8	79	16	132	20	49	9			167	23			42	21	35	21	43	15	11	41		
Philadelphia			13	12	26	21	10	[3] 12			13	19	(6)		1	23	7	18	36	22	3	12		
Reading											2	20												
Springfield			1	12			(7)				4	23												
Syracuse			2	16			2	7			6	24												
Trenton											2	21												
Average per class		7		14		17		9		8		22		20		22		20		20		27		
NORTH CENTRAL CITIES																								
Akron			2	10	3	20	2	10			12	30												
Chicago	7	7	24	8	29	(9)	55	6					62	26					25	9				
Cincinnati			7	11	13	14	5	6			5	21									5	26		
Cleveland	20	[10] 14			18	8	18	8			26	29							40	19				
Columbus			2	14	9	18			1	10	6	25			(11)				9	22				
Dayton			3	10	3	13	3	11																
Des Moines			1	15		(8)	3	6	11	4	4	21												

[1] All of the data of this table have been obtained by questionnaires and personal inquiries sent to officials of the cities concerned.
[2] In hospital.
[3] Deaf and hard of hearing.
[4] Provided for in regular rooms.
[5] Noted under "open air."
[6] Organized September, 1928.
[7] Number per class not given, as many are instructed at home and in hospitals.
[8] Blind and sight saving.
[9] Included in data for crippled.

TABLE 7.—*Number of atypical classes and enrollment per class in 38 cities of over 100,000 population, 1927–28*—Continued

	Principal types																					
	Blind		Sight saving		Crippled		Deaf		Hard of hearing		Open air		Anæmic		Cardiac		Tubercular		Disciplinary		Parental	
1	2		3		4		5		6		7		8		9		10		11		12	
NORTH CENTRAL CITIES—continued																						
Grand Rapids	8	[10] 14	---	---	3	24	7	7	---	---	10	26	---	---	---	---	---	---	18	21	---	---
Indianapolis	---	---	---	---	3	17	---	---	---	---	9	27	---	---	---	---	---	---	---	---	---	---
Kansas City, Mo.	---	---	---	---	1	(9)	6	[8] 8	---	---	24	24	---	---	---	---	---	---	1	27	13	33
Minneapolis	9	[10] 9	---	---	12	16	8	9	---	---	4	23	---	---	---	---	7	21	---	---	---	---
Omaha	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
St. Louis	---	---	2	30	10	24	9	8	1	16	13	30	---	---	---	---	1	19	---	---	9	3
Toledo	1	8	---	---	8	25	3	9	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Youngstown	1	9	3	17	2	19	1	[8] 8	---	---	2	26	---	---	---	---	---	---	---	---	---	---
Average per class	---	10	---	14	---	18	---	8	---	10	---	26	---	26	---	---	---	20	---	20	---	22
SOUTHERN CITIES																						
Atlanta	1	6	1	8	---	---	1	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Baltimore	---	---	2	13	13	18	3	7	---	---	19	21	---	---	---	---	---	---	4	[14] 33	---	---
Fort Worth	---	---	---	---	---	---	1	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---
New Orleans	1	18	4	13	3	20	1	12	2	X	---	---	18	X	---	---	---	---	6	27	---	---
Richmond	---	---	2	10	---	---	1	9	---	---	20	20	---	---	---	---	---	---	2	37	---	---
WESTERN CITIES																						
Denver	---	---	---	---	---	---	2	9	---	---	1	25	---	---	---	---	---	---	---	---	---	---
Los Angeles	5	6	7	11	6	(9)	17	7	9	14	---	---	---	---	---	---	---	---	39	14	---	---
Seattle	---	---	7	15	(15)		7	9	---	---	---	---	---	---	---	---	---	---	---	---	6	36
Total classes	64		182		328		244		27		369		87		43		52		240		47	
Per cent	1.6		4.6		8.2		6.1		0.7		9.3		2.2		1.1		1.3		6.0		1.2	

	Principal types—Con.						Total number of classes in columns 2 to 15	Other types										
	Mentally defective		Backward		Gifted			Foreign		Homebound		Hospital		Prevocational		Probation		Restoration		Speechm
	13		14		15		16	17		18		19		20		21		22		23	
NORTH ATLANTIC CITIES																						
Albany	14	20	---	---	---	---	21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Boston	103	19	---	---	---	---	133	---	---	---	---	---	(5)	---	---	---	---	---	---	---	21	8
Bridgeport	20	17	---	---	---	---	21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Buffalo	90	22	---	---	---	---	105	---	---	---	---	---	---	---	---	3	105	---	---	140	11
Hartford	11	8	---	---	---	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jersey City	14	16	10	24	---	---	45	1	18	---	---	---	---	---	---	---	---	---	---	---	Centers	
Lowell	6	14	6	28	---	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Newark	50	15	---	---	---	---	95	---	---	---	---	---	---	---	---	---	---	---	7	33	13	1
New Bedford	10	15	---	---	---	---	17	---	---	---	---	---	(5)	---	---	---	---	---	---	---	---	---
New York	436	18	---	---	---	---	1,001	---	---	---	(5)	1	25	---	---	---	---	---	---	---	Center	
Philadelphia	316	19	---	---	---	---	425	11	22	---	---	---	(5)	---	---	X	---	33	22	98	4	
Reading	5	16	---	---	---	---	7	---	---	---	---	---	---	1	18	---	---	---	---	---	---	---
Springfield	17	17	4	19	---	---	26	2	52	X	---	---	---	---	---	---	---	---	---	---	---	---
Syracuse	3	19	(8)	---	---	---	13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Trenton	20	15	---	---	---	---	22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Average per class	---	17	---	24	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[8] Deaf and hard of hearing.
[5] Crippled.
[8] Not separated in reports.
[9] Number per class not given, as many are instructed at home and in hospitals.
[10] Blind and sight saving.
[14] Disciplinary and parental.
[15] Variable.

TABLE 7.—*Number of atypical cases and enrollment per class in 38 cities of over 100,000 population, 1927–28*—Continued

	Principal types—Con.						Total number of classes in columns 2 to 15	Other types									
	Mentally defective		Backward		Gifted			Foreign		Homebound		Hospital		Prevocational		Probation		Restoration		Speech	
	13		14		15		16	17		18		19		20		21		22		23	
NORTH CENTRAL CITIES																					
Akron	7	22	---	---	---	---	26	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chicago	218	18	---	---	---	---	420	---	---	---	---	---	---	---	---	39	15	---	---	---	---
Cincinnati	40	17	---	---	---	---	75	---	---	(5)	---	---	---	---	---	---	---	---	---	---	---
Cleveland	86	17	124	28	24	27	356	1	23	---	---	---	---	98	22	---	---	---	---	91	24
Columbus	10	18	10	18	---	---	47	---	---	---	---	---	---	---	---	---	---	10	18	(12)	
Dayton	4	20	22	20	1	22	36	---	---	---	---	---	---	7	14	---	---	---	---	---	---
Des Moines	4	16	---	---	---	---	23	---	---	(11)	---	---	---	(8)	---	---	---	---	---	Centers.	
Grand Rapids	20	20	---	---	---	---	66	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Indianapolis	11	17	2	41	---	---	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Kansas City, Mo	25	23	---	---	---	---	70	---	---	---	---	(5)	---	27	27	---	---	---	---	---	---
Minneapolis	52	17	---	---	---	---	92	---	---	---	---	---	---	---	---	---	---	---	---	440	6
Omaha	8	25	---	---	---	---	8	---	---	---	---	---	---	---	---	---	---	---	---	Centers.	
St. Louis	44	14	---	---	---	---	89	---	---	---	---	5	24	---	---	3	22	---	---	Centers.	
Toledo	33	18	---	---	---	---	45	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Youngstown	27	[13] 20	---	---	---	---	36	1	29	---	---	---	---	---	---	---	---	---	---	---	---
Average per class		19		27		25															
SOUTHERN CITIES																					
Atlanta	33	15	---	---	---	---	36	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Baltimore	64	17	---	---	---	---	105	5	16	(5)	---	(5)	---	---	---	---	---	---	---	---	---
Fort Worth	1	20	---	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---
New Orleans	4	34	8	18	---	---	47	---	---	---	---	1	76	---	---	---	---	X	---	25	X
Richmond	12	[13] 21	---	---	---	---	37	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WESTERN CITIES																					
Denver	21	[13] 21	---	---	---	---	24	6	26	---	---	---	---	---	---	---	---	---	---	93	12
Los Angeles	140	16	39	43	15	30	277	---	---	(5)	---	(5)	---	---	---	---	---	75	46	---	---
Seattle	46	30	7	21	---	---	73	---	---	---	---	(5)	---	---	---	2	26	---	---	---	---
Total classes	2,035		232		40		3,990	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Per cent	51.0		5.7		1.0		100.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[5] Crippled.
[8] Not separated in reports.
[11] Included in data for crippled.
[12] Started 1928–29.
[13] Mentally defective and backward.

Explanation of table: Cities are arranged alphabetically within sections of the country. In columns 2 to 15, and 17 to 23, inclusive, first the number of classes is given, then the enrollment per class.

Read table as fgllows: Albany had one class for the semisighted containing 11 pupils, 2 for the deaf with an average enrollment of 7, etc. The total atypical classes in Albany was 21. A cross indicates missing data.

What standards with respect to the number of pupils in a class have been established by administrators and by legislation relative to atypical classes? Table 6 of Part I indicates the legal restrictions as to the size of these classes. In the 13 States having such regulations the usual class minimum specified is 10, although 1, 3, 5, and 8 are other minima mentioned in a few cases. Maxima are given in only four instances, three of them being in the New Jersey law. The maxima for that State are: 10 for the blind, 10 for the deaf, and 15 for the mentally subnormal. New York also stipulates a maximum of 15 for the last-named group.

A number of State departments of special education have established certain standards as to enrollment per class. These have been discussed in Part I, Chapter II. Some of the standards are variable, depending upon the number of grades in one room and upon the mentality of the pupil. Michigan specifies a maximum of 10 for the deaf; Missouri, 15 to 20 if they are merely coached; Ohio, 10, 12, or 15, depending on grades per room. The maximum for the blind is 15 to 20 in Missouri and 12 or 16 in Ohio; for the crippled, 15 to 25 in Missouri, 18 to 25 in Ohio; for the feeble-minded, 15 to 18 in Missouri, 7 to 15 in Wisconsin. Summarizing these regulations, we find that two maxima for the blind are 16 and 20; 2 for the crippled are each 25; 3 for the deaf are 10, 15 and 20; 2 for the feeble-minded are 15 and 18.

Wallin [10] has proposed maxima for certain atypical classes based on his extensive experience with such groups. They are as follows: For the blind and semiblind, 10 to 20; for the deaf and semideaf, 10 to 20; for the crippled 20 to 30 if of normal mentality, 18 to 22 if of dull mentality, 13 to 16 if feeble-minded; for speech defectives, 10 to 20; for the backward, 18 to 25; for the mentally defective, 15 to 18.

In Table 7 the enrollments per class of blind or partially seeing children are found to range from 6 to 14, several groups containing both partially sighted and blind pupils. The average for each section is comparatively low. The sight-saving classes vary in size from 8 to 30 [11] with averages for the first two sections of 14 each. Most of the enrollments are very close to this number, which is lower than the maxima proposed for these classes. The enrollment in classes for the crippled ranges from 8 in New Bedford and Cleveland to 25 in Toledo, with an average of 17 for the North Atlantic cities and 18 for the North Central group. These values are less than the suggested maxima. There is more variation among cities for this group than was noted for sight-saving classes. The enrollments in classes for the deaf extend from 5 in Atlanta to 14 in Fort Worth, with an average of 9 for the North Atlantic section, 8 for the North Central cities, 10 for the Southern group, and 8 for the Western. None of these averages exceeds the maxima which have been proposed; a few, on the contrary, are below a minimum which has been stipulated. For open-air classes the average enrollment in the North Atlantic cities is 22 and in the North Central section 26. The smallest enrollment is 9 in New Bedford, and the largest is 30 in St. Louis.

The enrollment in disciplinary classes ranges from 9 in Chicago to 33 in Baltimore, the average for the North Atlantic and the North Central cities being 20 in each case. Seven heads of departments of

[10] Wallin, J. E. W. The Education of Handicapped Children, pp. 114–128.

[11] This number for St. Louis probably indicates a part-time coaching class.

special education submitted to the writer their conceptions of the proper size for these classes. Their replies extended from a minimum of 15 (the usual minimum was 20) to a maximum of 35. All of the cities of Table 7 fall within this range. Only one State, Pennsylvania, has legislated on this subject, prescribing a minimum enrollment of 10 per class. The parental school classes have a somewhat larger size than the regular disciplinary classes, the average for all the groups being 29. This is probably not too large a class when it is realized that these pupils are under constant supervision for the entire day and are well known to the instructors.

The classes for mental defectives ranged in enrollment from 8 in Hartford to 34 in New Orleans. The average for the North Atlantic cities was 17; for the North Central group, 19; for the Southern cities, 21; and for the Western Division, 22. When we examine the suggestions of authorities as to the proper class size for subnormals, it is found that the Department of Education of Missouri requires a class of 15 to 18; Wisconsin requires from 7 to 15. Wallin suggests 15 to 18 for mental defectives and 18 to 25 for the backward. It seems then that 18 is a favored maximum. On this basis one-half of the cities reporting are found to have too high an enrollment. Ten classes for the backward show an average per class of 26, although the range is from 18 to 43. This latter number is considerably above the suggested maximum.

The total number of atypical classes ("principal types") in the 38 cities of Table 7 is 3,990, an average of 105 each. The variation, however, is very great, ranging from only 2 classes in Fort Worth to 1,001 in New York. The percentage distribution of classes among the various atypical groups is approximately the same as the enrollment percentages given in Table 4. The classes for the mentally subnormal represent 56.7 per cent of the total.

Summarizing the preceding discussion concerning the enrollment in the atypical classes of 38 cities, we may say that in general the average enrollment per class is close to the minimum proposed by a number of authorities. For many of the types the average per class in the North Central cities is greater than for the North Atlantic group. Very little can be said concerning the other sections of the country, except that the averages of the Southern cities are higher than those in the other groups in the several cases where there are sufficient data to make a comparison.

D. Summary and Conclusions

1. All of the cities reporting have atypical classes except San Antonio. An average of 5.9 types of classes are maintained per city. (See Table 1.)

2. Since 1924 the number of cities providing for sight defectives has increased 233 per cent; for the crippled, 179 per cent; for the deaf, 52

per cent; and for speech defectives, 17 per cent. There has been no increase in cities providing for the incorrigible.

3. On the basis of average number of types of classes per city, the North Central group stands first, with an average of 6.6; then follow in order the Western, 5.9; North Atlantic, 5.5; South Atlantic, 4.7; and South Central, 3.3. The large cities of Ohio, California, New Jersey, Michigan, Minnesota, and Missouri average over five types per city. Texas, Pennsylvania, and Connecticut have a low average, considering the number of large cities concerned. (See Table 1.)

4. The percentages of the cities comprised in this study providing classes for the various atypical groups are: Subnormal, 97 per cent; open-air, 72 per cent; deaf, 69 per cent; blind, 59 per cent; crippled, 57 per cent; speech defectives, 41 per cent; incorrigible, 41 per cent; and gifted, 12 per cent.

5. If an index number is assigned to each geographic section of the United States based on its provision of classes for the eight principal atypical groups, it is found that the North Central Division ranks first; then follow in order the Western, North Atlantic, South Atlantic, and South Central Divisions.

6. Of the 52 respondent cities, classes for mentally subnormal children were the first to be started in 19 cities; for the deaf and hard of hearing in 16; classes for the incorrigible in 10; open-air classes in 7; classes for defective sight in 7; and for the crippled, speech defectives, and prevocational groups in one instance each. (See Table 2.)

7. Sight-saving classes have had a continual increase in recent years. Classes for crippled children have also had a decided development of late. Open-air classes seem to have fallen off somewhat. Speech defectives have had a steady recognition since 1910. Disciplinary classes have declined in rate of growth during the past few years. Classes for the mentally defective have been established in 66 of the 68 cities considered. (See Table 3.)

8. During 1927–28, 42 cities (of over 100,000 population) enrolled 87,097 atypical children in special classes. This represented 2 per cent of the total enrollment in all classes in these cities. The average ratio of pupils in atypical classes to total enrollment was as follows: North Atlantic cities, 0.020; North Central, 0.022; Southern, 0.012; and Western, 0.019. (See Table 4.)

9. The percentage of all atypical pupils enrolled under the different classifications are: Mentally subnormal, 57.3 per cent; open-air groups, 17.8 per cent; crippled, 9.4 per cent; incorrigible, 7 per cent; sight defective, 4.1 per cent; hard of hearing, 3.1 per cent; and gifted, 1.3 per cent. (See Table 4.)

10. Only 7 of the 48 respondent cities equaled the proposed ratio of special class enrollment to total enrollment in any one group. Six of these cities are in the North Central group. (See Table 6.)

11. The enrollment per sight-saving class varied from 8 to 30, with an average of 14 for the North Atlantic and Central sections. In classes for the crippled the enrollment ranged from 8 to 25, with an average of 17.5 in these two sections. Classes for the deaf have enrollments from 5 to 14, with an average of 9. Open-air classes enroll from 9 to 30, with an average of 24 for the first two sections. Disciplinary classes enroll from 9 to 33, with an average of 20 for the first two divisions. Classes for the subnormal enroll from 8 to 34, with an average of 20 for all sections of the country. (See Table 7.)

12. There were 3,990 special classes in 38 respondent cities in 1927–28. The number per city ranged from 2 classes in Fort Worth to 1,001 in New York City. (See Table 7.)

13. All of the seven cities of 100,000 population of Ohio have established classes for the blind, crippled, and deaf. The seven largest cities of Massachusetts have established sight-saving classes, open-air classes, and classes for subnormal children. (See Table 1.)

14. Speech defectives have inadequate facilities in all parts of the country. Disciplinary classes are few in number. Classes for the gifted are provided in only eight of the large cities. (See Table 1.)

15. The North Central cities have been somewhat ahead of both the North Atlantic and Western Divisions and considerably ahead of the Southern cities in the inauguration of special classes. (See Table 1.)

16. The ranks of the sections of the country as to enrollment of atypical pupils in relation to the probable number in the school system is as follows: First, North Central section; second, North Atlantic; third, Western; and, fourth, Southern. (See Table 6.)

17. The number of special classes established by local school systems for atypical children should bear some relationship to the probable number of such children in the community.

18. In general, the average enrollment per class is close to the minimum proposed by a number of authorities. For many of the types the average number per class is greater in the North Central cities than in the North Atlantic group. (See Table 7.)

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Chapter II

Administration of Classes for Atypical Children

This subject will be considered under three headings: (A) The mentally atypical, (B) the physically atypical, and (C) disciplinary problems. Data concerning the eight "principal" types [1] of exceptional children will be presented.

The original data for this discussion have been procured from questionnaires sent to principals or directors in charge of special education in the 68 cities of over 100,000 population (1920 census) during March, 1929. Although a complete response was not received to this inquiry, certain tendencies in the administration of atypical classes may be noted from the replies.

A. The Mentally Atypical

1. THE MENTALLY SUBNORMAL

Sixty-six cities provide classes for mentally subnormal children.[2] About one-third of these supplied complete data for the following analysis:

Character of enrollment.—In the classes of 30 cities reporting, there was a total average daily enrollment of 12,815 boys and 6,611 girls. The former number is 66 per cent of the total and the latter 34 per cent. This agrees closely with a recent United States Office of Education report embracing 218 city day schools, in which the percentage of boys was 64 and of girls 36.[3]

Fifteen cities reporting on kindergarten enrollment showed an enrollment of 103 in special classes out of a total of 5,289, or 1.95 per cent. Twelve cities reported 220 colored pupils out of a total of 1,461, or 15.05 per cent.

Maximum and minimum in a class.—The minimum number in a class ranged in the various cities from 10 to 22, the maximum from 15 to 25. The average minimum was 15.6, the average maximum 19.2.

Number and distribution of classes.—Table 8 shows the number and distribution of subnormal classes in 36 cities of over 100,000 popula-

[1] These types are: Blind, crippled, deaf, speech defective, disciplinary, mentally subnormal, gifted, and anæmic, tuberculous, etc.

[2] See Table 1.

[3] Schools and Classes for Feeble-minded and Subnormal Children, 1926–27. U. S. Bureau of Education Bulletin, 1928, No. 5, p. 2.

tion. All of these cities have single classes distributed in various schools about the city with the exception of Des Moines and Reading. The former has one school of four classes and the latter has one of five. To show the general tendency of having one or two classes in a school rather than a larger number grouped together as a center, the following data may be cited: Twenty-two cities had a total of 560 classes; 240 of these, or 43 per cent, were distributed one to a building; 108, or 19 per cent, were in schools of two classes each. Thus, 62 per cent were in schools containing one or two classes each. The largest school containing subnormal classes was the Seguin School of Cincinnati, which had 17 such groups.

Certification requirements.—Wallin suggests that teachers of subnormal classes should be normal-school graduates, that they should have a minimum of six or seven semester hours of credit in the strictly technical branches, and, if possible, should have had a few years of experience with normal children in the lower grades.[4]

TABLE 8.—*Number and distribution of public-school classes for the mentally subnormal in 36 cities of over 100,000 population, 1927–28* [1]

Cities	Number of schools having 2 or more classes	Total number of classes	Cities	Number of schools having 2 or more classes	Total number of classes
Akron [2]	2	7	Newark	4	50
Baltimore [2]	14	64	New Bedford [2]	0	10
Boston	6	103	New York		436
Bridgeport [2]	1	20	New Orleans		12
Buffalo	5	90	Oakland [2]	3	26
Cincinnati	15	40	Omaha [2]	0	7
Cleveland [2]	17	86	Paterson [2]	3	15
Dayton [2]	4	26	Philadelphia [2]	10	316
Denver [2]	4	21	Portland [2]	3	28
Des Moines [2]	1	4	Reading [2]	1	5
Detroit [2]	8	135	Richmond [2]	0	12
Hartford [2]	1	20	Rochester		48
Indianapolis		11	San Francisco		45
Jersey City		24	Seattle [2]	4	53
Los Angeles	11	82	Spokane [2]	1	7
Memphis [2]	1	7	Toledo [2]	9	33
Milwaukee		37	Trenton [2]	4	20
Minneapolis [2]	11	52	Washington		25

[1] Data for this table have been obtained directly from questionnaires sent to those in charge of special classes in the various cities.
[2] This city is one of the 23 supplying complete data for this chapter.

Table 9 presents the certification requirements in 22 cities. Seven of them require nothing further than graduation from high and normal school. Twelve specify experience in regular or special classes. Fifteen require special professional preparation. Ten specify both professional preparation and experience.

Chronological and mental age range.—The chronological ages varied from 5 to 20. The average minimum age was 6.9 years; the average maximum age was 16.6 years.

[4] Wallin, J. E. W. The Education of Handicapped Children, pp. 256, 257.

The mental ages extended from 2 to 15. The average minimum age was 4.2; the average maximum, 10.8.

I. Q. range.—The minimum I. Q. ranged from 20 to 56, with an average of 45.8. The maximum I. Q. varied from 68 to 92, with an average of 81.6.

Prevalence of type.—Very few cities seem to have made a study of the probable number of mentally subnormal children among their entire school enrollment. Only 4 cities of the 23 being considered in the present chapter reported that they had made such investigations. Bridgeport found 2 per cent mentally subnormal in a test carried on in her schools over a period of four years. Cleveland, Detroit, and Portland report 1.5 per cent of their school children to be subnormal.

Segregation and classification by sex.—Ten cities reported that the boys and girls were not placed in separate classes at any time. Reading separates them at all times; Baltimore does so in any school containing more than one class; Denver in a few of the buildings; Paterson in two schools containing four classes. One city separates the sexes after they are 10 years of age, four cities after age of 12, one after 13, and two after 14. Hartford makes the division when they have reached a mental age of 7.

TABLE 9.—*Certification requirements for teachers of public-school classes for the mentally subnormal in 22 cities of over 100,000 population* [1]

Cities	Requirements beyond normal-school training		
	Special preparation	Experience	Miscellaneous
Akron	Necessary, but amount not specified.	6 years	
Baltimore:			
Class A	1 year; 30 college credits	1 year in special class	
Class B	1 or more approved courses and election as teacher in public schools.	None	
Class C	1 or more approved courses and status as substitute teacher.	None	
Bridgeport	1 course in each of special psychology, physical education, and handwork.	3 years in elementary grades.	
Cleveland	None	None	
Dayton	2 semester hours in each of subnormal psychology, clinical psychology, clinic practicum, speech correction, manual arts, group testing. Six semester hours' observation and practice with ungraded and special class children.	None	
Denver	None	None	Special aptitude for working with this group.
Des Moines	6 weeks' special training	2 years	
Detroit	Courses in methods, tests, psychology of the defective child.	1 year	"A" rating (State life certificate is given).
Hartford	Same as Bridgeport	3 years in elementary grades.	
Memphis	None	None	Special fitness. "The teachers go to Vineland Training School each summer for special instruction."

[1] The data of this table have been obtained directly from those in charge of special education.

TABLE 9.—*Certification requirements for teachers of public-school classes for the mentally subnormal in 22 cities of over 100,000 population*—Continued

Cities	Requirements beyond normal-school training		
	Special preparation	Experience	Miscellaneous
Minneapolis	Practice teaching and special courses in special education.	2 years outside of city.	
New Bedford	None	8 years in elementary grades.	Summer courses in teaching subnormal children and course in handwork must follow appointment.
Oakland	None	None	Regular teacher qualifications.
Omaha	None	None	Do.
Paterson	Course in psychology of the defective child, handwork, clinical tests and measurements.	3 years	
Portland	None	2 years	
Reading	Minimum of 6 semester [2] hours in content courses of 2 in manual training and industrial arts, of 2 in special methods. Total of 20 required.	None	Special certificate by department of public instruction is required. Total of 20 semester hours required.
Richmond	At least 1 summer in special study.	None	
Seattle	Course in methods for the mentally retarded.	3 years in elementary grades. One year of experience must be in teaching the mentally retarded.	
Spokane	Training and study in teaching this type.	None	
Toledo	Course in abnormal psychology and industrial arts.	None	
Trenton	Same as Paterson	3 years	

[2] Maximum semester hours may be offered as follows: 8 in experience (1 year=4 semester hours); 10 in content courses; 6 in manual training, etc.; 6 in special methods.

Segregation by color.—Three cities (Baltimore, Memphis, and Richmond) had separate classes for white and colored children. Dayton provided one class for colored only. Nineteen reported no special segregation of the two groups.

Bases of classification.—Eighteen cities reported some plan of grouping in use; five had no definite plan. The former cities used 11 different bases for classification. Seven of them employed mental ages alone; two used mental age and social adjustment. The nine other plans were all different, involving such factors as grade, ability, I. Q., behavior, capability, etc.

Physical standards.—Sixteen cities replying to the question concerning physical standards reported as follows:

	Cities
No standards established	8
No cripples admitted	1
No crippled or epileptics	1
No tubercular or epileptics	1
No tubercular, epileptics, crippled, blind, or deaf	1
Must be able to take care of self and be not too objectionable in appearance	4

Mental examinations.—Twenty-two of the cities give this before admission; Hartford does so at times. The examination is given by

the school psychologist in 7 cities, by the psychological clinic in 5, and by 9 other agencies in the remaining cities.

Mental standards.—There is considerable variation in the mental standards, as is shown by the following reports of 20 of the cities. It will be noted that the lowest I. Q. specified is 45; the highest, 85. The lowest mental age explicitly mentioned is 4 years.

	Cities
50 I. Q. to 70 I. Q., and higher in emotional cases	1
50 I. Q. to 70 I. Q	1
50 I. Q. to 75 I. Q	3
50 I. Q. to 75 I. Q., and 3 or more years retarded	1
50 I. Q. to 80 I. Q	1
60 I. Q. to 85 I. Q	1
50 I. Q. to 85 I. Q. (M. A. 5 to 12)	1
45 I. Q. to 75 I. Q. (M. A. of 5)	1
Not under 60 I. Q	1
Not over 80 I. Q	1
Not over 75 I. Q	1
I. Q. over 70, and not over 2 years retarded	1
At least 4 years mental age and 2 or more years retarded	1
Mental age of 5 and I. Q. of at least 50	2
Mental age of at least 5 and 3 or more years retarded	1
Mental age of 2 years under chronological age and inability of pupil to fit into a slow class	1
Not educable in regular grades	1

Daily program—School program.—Twenty-two cities reported school time per day ranging from 4 hours in Minneapolis to 6 hours and 5 minutes in Hartford. This time is exclusive of the noon lunch period and any other rest or recess periods during the day. The most frequently noted school day was 4 hours and 30 minutes, and the average was 4 hours and 50 minutes.

Lunch periods were as short as 30 minutes when the pupils remained in the school and as long as two hours (New Bedford) when they went home. The recess periods were usually 2 of 10 or 15 minutes each, although Minneapolis had 2 of 30 minutes each.

Time allotments.—The percentage of school time devoted to academic instruction varied from 20 in Reading to 80 in Detroit; the average was 48 per cent. Manual or occupational training ranged from 10 per cent in Detroit to 60 in Reading, the average being 36 per cent. Physical training and health instruction had a minimum allotment of 10 per cent in nine of the cities and a maximum of 33⅓ per cent in Minneapolis and Hartford. The time allotment in the last two cities was one-third for each of the three divisions of the curriculum.

Extension activities.—Akron maintains both night and summer schools for the mentally subnormal. Detroit started night instruction for this group a year ago, but it was "not very successful." Summer instruction for mentally subnormal children was begun in

Detroit in 1929. Memphis offers night instruction to this group, but few enroll in the classes. Minneapolis gives home instruction in some cases and also offers summer courses. Portland provides for both night and summer classes. With the exception of the five preceding cities, none offers either night or summer classes.

Records.—Some of the types of records maintained by the cities are as follows: Progress in academic work and conduct; academic progress and weight, height, gait, posture and, character; case histories; yearly progress record showing growth in school record and health.

Lunches.—Fourteen cities replied that they did not supply lunch free or at a nominal price. Nine others supplied it for a very small amount.

Transportation.—Twelve of the cities did not provide free transportation. The other 11 did, but usually under stipulated conditions involving distance or inability of pupil to pay.

Housing and equipment—Housing.—In most instances the classes seem to be held in old buildings, which in some cases have been remodeled, but in other cases have been used without any alterations. Some illustrations of housing conditions are the following:

Des Moines: Modern 4-room building. Two rooms, toilets, and office on the first floor; two rooms, bathroom, and nurse's office on second floor; large yard.

Detroit: Seven old buildings, a portable building, and numerous classes.

Spokane: Seven classes. Five are in a remodeled apartment house. Two floors. Plenty of window space; electricity; no ventilating system. One room for manual training, three for girls' household arts (kitchen, dining room, living room). An assembly room, workroom for loom, book or stock room, office, and large dining room. Rooms for school doctor, dentist, and Junior Red Cross Hospital. Two other classes are in regular buildings. One is for younger children and the other for a group of large boys. As much handwork as possible is given.

Equipment.—Although the housing appears to be inadequate in the case of some of the cities, the equipment in most cases seems to be more satisfactory. Practically all of the rooms or centers for the mentally subnormal children are equipped with movable furniture, manual training apparatus, and looms. Some have, in addition to this, cooking and sewing equipment, equipment for cement work, tin work, caning, and painting. Gymnasium facilities are provided in all of the classes in 9 of the cities, in some classes in 6 cities, and not at all in 8.

After-school careers.—Fifteen cities reported some attempt to follow the careers of pupils after they had left school; eight replied that no such plan was in operation. Some of the plans in use are as follows:

Bridgeport: Teacher visitation in the home.

Cleveland: Employment is supervised for two years. Investigations have been made comprising the after-school records of both boys and girls.

Memphis: Principal keeps follow-up records. Children have to report to school when they lose jobs. Fifty-six returned because of this fact during the period January 1 to April 1, 1929.

Richmond: Each teacher is supposed to keep in touch with pupils for five years.

Seattle: About 25 cases are studied yearly as result of individual conference.

Trenton: Record is kept of jobs, wages, length of time in job, and cause of leaving. A survey was made during 1928.

Limitations, needs, and progressive steps.—The replies of the cities responding to this question are summarized below.

Akron: Special classes have been limited because of "phenomenal growth" of city population. Many children are on half time.

Bridgeport: Mentally defective children are now detected by group and individual intelligence tests in first grade. The most urgent need is closer cooperation with employers.

Denver: Courses of study in arithmetic and reading for these children are being prepared by department of curriculum and research.

Des Moines: The public school has recognized the type and has provided for their needs. It has focused the attention on the problem which has led to much needed social legislation and provision, including (*a*) State survey of handicapped children; (*b*) raising of marriage laws; (*c*) State eugenic law; (*d*) special consideration in juvenile court; (*e*) special consideration in municipal and district court; (*f*) institutionalizing of some types; (*g*) contributory delinquency law; (*h*) registration of feeble-minded, etc.; (*i*) careful histories of court cases so as to prevent long-drawn-out trials in order to establish responsibility; (*j*) a better social consciousness toward the whole problem; (*k*) the parents have some one with whom to discuss their problem over a long period of time, so they can be persuaded to do what seems best.—*Director of Department of Exceptional Children.*

Memphis: The Y. M. C. A., P.-T. A., and medical profession have been very generous in their assistance.

Philadelphia: The teaching in the special classes is much better than ever before. The psychological staff has proved to be of exceptional merit. The problem child should be segregated at an earlier age.

Spokane: More special classes are needed in different parts of the city. Facilities should be provided for the more accurate study of problem children.

Trenton: A survey is now being made to insure that all handicapped children may be adequately trained in the future.

2. THE GIFTED

Only 8 cities out of 68 of over 100,000 population have special facilities in the public schools for children who may be classed as having superior intelligence.[5] While this is a small number, nevertheless it is an increase over the total reported in a study made by the United States Office of Education in 1911, in which only 5 cities out of 898 supplying data reported such classes.[6] The 8 cities reporting special classes for these children are: Camden, Cleveland, Dayton, Los Angeles, Oakland, Rochester, Scranton, and Worcester.

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[5] See Table 1.

[6] Provision for Exceptional Children in Public Schools. U. S. Bureau of Education Bulletin, 1911, No. 14.

In view of the scarcity of gifted classes, it seems pertinent to inquire as to the need for this type of education. The Government bulletin mentioned above refers to the testing by the Binet scale of 2,000 children in 1911, in which it was shown that 4 per cent were one year or more mentally above their chronological age. The same bulletin also points out that data collected during 1911 from 319 cities showed that in the average city 4 per cent of the school children are one year or more under age for grade. The conclusion was therefore reached by the authors of the bulletin that 4 per cent of school children may be classed as unusually bright or supernormal. During 1927–28, 5,431,528 boys and girls were enrolled in the public schools in cities of over 100,000 population.[7] Four per cent of this number is 217,261. When this number is compared with the number of gifted pupils enrolled in the cities reporting, the absolute neglect of these children is readily apparent. This fact is stated very succinctly by Horn, when, in discussing the need of differentiated educational treatment for the "supertypical," he remarks: "As things stand to-day the American public school is distinctly not a good means for the education of well-endowed children." [8]

Although complete data are lacking from the cities reporting, it is believed that the material presented below will be of some assistance in determining the policies followed.

Cleveland.—"The function of the psychological clinic in Cleveland is to see that every child in school receives suitable educational opportunities. * * * It is the intention in the Cleveland schools to keep every child working up to the highest level of his ability. For this purpose, elementary pupils are sectioned in three principal groups according to intelligence. The groups are called by the letters X, Y, and Z. * * * The X group includes those of more than average intelligence. * * * Each group is given subject matter difficult enough to require its best sustained effort. * * * Pupils are placed in the X, Y, Z groups on the basis of group intelligence tests given by the bureau of educational research. The group tests are given by an examiner to an entire class at one time. Naturally, there are many border-line cases requiring further study." [9]

On June 15, 1928, the enrollment in the gifted classes of this city was 395 in the elementary school and 235 in the junior high, a total of 630 in the entire school system.[10]

Dayton.—The enrollment in the public schools of this city during 1927–28 was 30,099.[11] Four per cent of this number, representing the probable number of gifted children, amounts to 1,204. The

[11] U. S. Bureau of Education Bulletin, 1929, No. 34. Op. cit., p. 21.
[7] Statistics of City School Systems, 1927–28. U. S. Bureau of Education Bulletin, 1929, No. 34, p. 8.
[8] Horn, J. L. The Education of Exceptional Children, p. 326.
[9] Report of the Superintendent of Schools, Cleveland, Ohio, 1927–28, pp. 59, 60.
[10] Ibid, p. 130.

actual enrollment during 1927–28 in the one class provided was 22, with an average daily attendance of 18. The maximum number permitted in this type of class in Dayton is 25 and the minimum 15. The ages of the children range from 12 to 15 years. Before being admitted they must show that they are in excellent health and must have an "A" record in the seventh grade. They are returned to grade at once if unable to do the work required. The sessions extend from 8 in the morning until 10 minutes after 2, with a noon lunch period of 30 minutes; the net school time is, accordingly, 5 hours and 40 minutes. The academic work ordinarily requires 97 per cent of the time, although those pupils showing special ability in manual training activities spend 25 per cent of their time in this work and 72 per cent in the academic field. Three per cent of the program is represented by physical training.

Los Angeles.—The Educational Research Bulletin of the Los Angeles city schools for May, 1926, contains an excellent description of the procedure followed in the administration of gifted classes in that city.[12] Quotations from this bulletin are as follows:

> We believe that the development of each individual to the highest possible point is probable only when the work is fitted to the capacities of the individual. To that end we organize rooms where pupils of distinctly superior mental ability are afforded an enriched curriculum and much opportunity for initiative and for self-expression in creative work.
>
> In these rooms 100 per cent accomplishment in the fundamental skills is one of the goals expected of each child. This is consummated with about half the drill and in about half the time necessary in the case of normal pupils. That leaves half the time for enrichment, * * * for developing special abilities, following interests and hobbies, writing, club activities, acquiring information, etc.
>
> During the year 1925–26 there have been nine rooms in the Los Angeles city school district for curriculum enrichment for children of superior mental ability. The membership of these rooms averages 30 pupils each. (During 1927–28 there were 15 rooms and an average enrollment of 450. Thirteen of these classes are for children whose academic ability ranges from sixth to twelfth grade; two classes are for primary children.[13]) The qualification for membership is an intelligence quotient above 124. The mean intelligence quotient this year has been 143.7.
>
> It has been found by standardized tests, given at the time of assignment of the pupils to the rooms, that the mean educational quotient is approximately 138, and the average accomplishment quotient is approximately 87. That is to say, the subject matter of instruction has been mastered to a point 38 per cent above norm for their chronological ages, but that they are accomplishing more than 12 per cent less than they are able to accomplish.
>
> It has been found by equivalent forms of the standardized tests, given one school year after the pupils had entered the rooms, that the mean educational quotient has become approximately 142, and the mean accomplishment quotient has reached approximately 96. This improvement has been made while each

[12] Vol. 5, No. 9, p. 12.
[13] Insert by writer.

pupil has been carrying a much heavier program than he carried before entering the room.

Among the additions to the subjects studied by average children in regular classrooms, these children study a modern language for vocabulary and pleasure reading, special vocal music and music appreciation, appreciation and writing of poetry, algebra, and elementary sociology.

Among the activities in which they take part are dramatization, the publication of school papers, debating, and various clubs, such as astronomy clubs, sociology clubs, art clubs, and others.

Oakland.—The following quotation from a report on classification by the bureau of curriculum development, research, and guidance tells briefly of the policy pursued and results expected in the public-school education of gifted children in this city: [14]

Classification and promotion of pupils in school exist for a single purpose; that is, the most efficient instruction of every child in view of all the means at our command. There is therefore, just one rule that governs our policy: Place each child in that class or group where his needs can be most nearly met, considering all the opportunities which the school is able to offer and considering the rights of other children of the group in which he is placed.

In general, the ability to master a prescribed course of study had been the basis for grade classification. This still remains the outstanding basis for grading pupils, but other factors, such as age, physical and social development, occupational and economic probabilities, must be taken into consideration for every child if the greatest efficiency in classification is to be attained.

The administrative policy in the Oakland public schools, in accordance with the ideals mentioned above, encourages the plan of ability grouping and progress of pupils as follows: (1) For those pupils who have ability above the average; (2) for those pupils who have average ability; (3) for those pupils who for some reason or another are not able to do with a reasonable expenditure of time and effort the work set as standard for the grade.

The first group is designated the "X" section or accelerated group. These pupils are expected to reach an unusually high standard of work, cover an enriched course of study, and finish the 12 grades in school with a saving of from one to two years of time. No pupil is accelerated more than two years beyond the grade to which his age entitles him unless his case has been investigated and approved by the designated agent for such investigation in the superintendent's office.

B. The Physically Atypical

This section will deal with the administrative practices followed in classes for the blind, crippled, deaf, open-air groups, and speech defectives in certain cities of over 100,000 population (1920 census).[15]

1. THE BLIND

Forty cities provide classes for the blind; 14 sent complete replies to the questionnaires concerning this type.[16] This number is included under each topic discussed unless otherwise specified.

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[14] Typewritten report, undated, received from Oakland during April, 1929.

[15] See Introduction (Ch. I, Pt. I) for definitions of these terms.

[16] See Table 10.

Character of enrollment.—In the classes of 23 cities there was a total average daily enrollment of 433 boys and 395 girls. The former number is 52 per cent and the latter 48 per cent of the total. This agrees closely with a recent United States Office of Education report embracing 80 schools and institutions for the blind in which the percentage of boys was 55 and of girls 45.[17] None of the cities reported any kindergarten enrollment, and colored children were present in the classes of only three cities, there being 2 in Akron, 3 in New Bedford, and 7 in Washington.

Maximum and minimum in a class.—The minimum number in a class ranged from 7 to 12, the maximum from 10 to 20. The average minimum was 9, the average maximum 15.6. The size of class is regulated at times by the number of grades assigned to a teacher.

Number and distribution of classes.—Table 10 shows the number and distribution of these classes in the cities included in the present analysis. The general plan seems to be to have one or two classes in a building and distributed throughout the city so as to insure accessibility.

TABLE 10.—*Number and distribution of public-school classes for the blind*[1] *in 14 cities of over 100,000 population, 1927–28*[2]

Cities	Type of class		Number of schools	Total number of classes
	Sight saving	Blind and sight saving		
Akron	X		2	2
Baltimore	X		2	2
Boston	X		Distributed throughout city	11
Cleveland		X	11 elementary; 5 junior high	20
Dayton	X		2 elementary; 1 junior high	3
Des Moines	X		1 junior high	1
Detroit		X	19	24
Los Angeles		X		12
Minneapolis		X	6 elementary; 1 junior-senior high	9
Newark		X	Several centers	5
New Bedford	X		1	2
New York		X		86
Philadelphia	X		Several in 1 school where possible	13
Toledo		X	1	1

[1] Includes blind and sight-saving classes.
[2] Data for this table have been obtained directly from questionnaires sent to those in charge of special classes in the various cities.

Certification requirements.—The Ohio cities report that they must have their certification requirements approved by the director of education.[18] Des Moines requires two years of grade experience; New Bedford, a course in the teaching of a sight-saving class; Detroit, at least three years' experience in the regular grades, and one course

[17] Schools and Classes for the Blind, 1926–27. U. S. Bureau of Education, Bulletin, 1928, No. 9, p. 1.
[18] The ruling of the Ohio State Department reads: "Qualifications of teachers of sight-saving classes appointed by local boards of education and the conditions and terms under which they are employed are subject to the approval of the director of education." Standards for Sight-Saving Classes. Columbus, Ohio, 1926.

which includes the anatomy, physiology, and hygiene of the eye. Teachers of Braille require further courses covering this field. Minneapolis requires two years' experience and special training for blind and sight-saving classes.

Intelligence.—The chronological ages varied from 6 to 22. The average minimum age was 7 and the average maximum 17.7.

The mental ages extended from 6 to 17.8. The average minimum age was 6.6 and the average maximum 15.2.

The minimum I. Q. ranged from 44 to 76, with an average of 65. The maximum varied from 102 to 150, with an average of 125.

Prevalence of type.—Only 5 cities of the 14 considered reported any study to determine the children requiring this instruction. Three of them (Cleveland, Des Moines, and New Bedford) reported that one-fifth of 1 per cent, or 1 in 500 of their total enrollment should be in sight-saving classes. Dayton found the number to be one-tenth of 1 per cent and Detroit 1.7 per cent.

Segregation and classification.—None of the cities reported segregation of their pupils on the basis of sex or color. Cleveland, Detroit, and Minneapolis, however, classified them according to intelligence. The pupils prepared their lessons under the guidance of their special teachers and then reported to the regular classes for recitation.

High-school instruction.—Of the cities reporting, special facilities are offered these children in the high schools of Akron, Boston, Cleveland, Dayton, Detroit, Minneapolis, Newark, and Toledo. Boston reports that 20 of these pupils were enrolled in the high school during 1927–28. Cleveland graduated 4 partially sighted children from high school in 1928, Detroit graduated 3, and Minneapolis 3.

Physical standards.—Akron specifies a standard of below 20/50 for admission; New Bedford stipulates 20/70 or less. The cities of Ohio specify the 10 points required by their State department.[19] Minneapolis and Detroit likewise stipulate these 10 points.

Mental standards.—All of the cities specify a mental ability equivalent to an I. Q. of 70.

School program.—School time per day varied from 4 hours and 25 minutes in New Bedford to 6 hours in Cleveland and Detroit. This time is exclusive of the noon lunch and any other rest or recess periods during the day. The average time was slightly over 5 hours daily. The earliest classes started at 8.30, and 3.30 was the latest closing hour. Lunch periods varied in length from 40 to 90 minutes. Recess periods differed widely. The various combinations represented were: Two periods of 10 minutes each, one of 15, one of 30, one of 20, and five of 5 minutes each.

Time allotment.—The percentage of school time devoted to academic instruction varied from 60 in Dayton to 89 in Toledo. Manual

[19] Prescribed Standards for Sight-Saving Classes. Op. cit., p. 2.

training ranged from 5 per cent in New Bedford to 20 in Dayton. Physical training had a minimum value of 5 per cent in Toledo and a maximum of 20 in Dayton.

Extension activities.—Night school for those having defective sight is maintained in Detroit. Summer school for this group is provided in Minneapolis. The Toledo Society for the Blind will give special instructions to children needing it at any time.

Lunches.—Lunch is furnished free in Akron. In Dayton, Des Moines, and Minneapolis it is not supplied free of cost. Cleveland and Detroit will supply children with free lunch if they are very poor. The other cities make a nominal charge for this service. In Cleveland it is 3 cents; in Des Moines, 5 cents a dish; in Detroit, 10 cents.

Transportation.—Transportation by bus or trolley car is provided for all of these children in Akron, Cleveland, Minneapolis, Newark, and Toledo. The other cities also supply this service if the school is too far away and the child is unable to pay. Trolley car is the usual mode of transportation. When necessary the fares of guides are also paid.

Housing.—The State of Ohio has issued very definite instructions concerning the location, size, and other necessary provisions in connection with sight-saving classes.[20] These requirements are briefly as follows:

Room: Average size.

Blackboard: Adequate number and not less than those in regular classroom. Trays about 26 inches above floor.

Decorations: Dull finish; buff French gray with dull white or cream ceiling.

Window space: Window sills not more than 40 inches from floor and glass area not less than one-fifth floor space. Light from left, if possible.

Orientation: Order of "preferable" exposures—northeast, east, north and east, northwest, west, north and west, north. No south exposure.

Window shades: Two per window, placed in middle. Neutral color.

Surface finish: All surfaces and paper should be finished with a dull mat surface.

Artificial light: Scientifically planned.

Baltimore has two well-lighted rooms with northern light. The two classes in New Bedford have a northwest exposure. The Detroit classes face the north or east; translucent totally inclosed globes producing a minimum illumination of 10-foot candles are employed. Minneapolis covers all of the points enumerated in the Ohio regulations. Philadelphia endeavors to group the classes in one school where possible; the rooms face the north or northeast. Boston and Newark emphasize convenience to car lines in the location of classes. The former city uses rooms exposed to the northeast or north and east.

[20] Prescribed Standards for Sight-Saving Classes. Op. cit., p. 2. Also see Sight-Saving Classes in the Public Schools. State Department of Education, Columbus, Ohio, 1926–27, 90 pp.

Equipment.—Special appliances listed for sight-saving classes in Ohio[21] include the following: Typewriters, clear-type books, models and specimens, charts, special maps, special globes, chairs, desks, musical instruments, special lighting equipment, cupboards, and culinary equipment. All of the cities provide equipment in substantial agreement with the above list. The totally blind children also require Braille books, Braille writing slates, Braille writer, Braille paper, and manual equipment.

Concerning books in the school library in heavy or raised type, Akron reported having 300 volumes in heavy type; Dayton, 40 in heavy type and none in raised; Des Moines, 220 in heavy type; Detroit and New Bedford, no books of either type; Toledo, 182 in raised and 70 in black type.

After-school careers.—In one of the cities visits are paid occasionally to former pupils to note their progress. Another city sends a questionnaire to former pupils annually; this is followed by an interview with the vocational counselor. Other cities seem to do little in this respect.

Limitations, needs, and progressive steps.—More Braille textbooks are required. Greater cooperation is needed between teachers of regular and of sight-saving classes. There is a lack in some schools of special instruction in music. There is slight provision for partially sighted students in senior high schools.

The extension of sight conservation work into junior high schools, abandonment of many undersized classrooms, and greater attention to lighting and equipment are some of the progressive steps cited.

2. THE CRIPPLED

Thirty-nine cities provided special classes for this type during 1927–28.[22] Fourteen replied satisfactorily to a questionnaire concerning these classes.[23] This number is included under each topic discussed unless otherwise specified.

Character of enrollment.—In the classes of 19 cities there was a total average daily enrollment of 1,616 boys and 1,495 girls. The former number is 52 per cent and the latter 48 per cent of the total.

Number and distribution of classes.—Table 11 shows the number and distribution of classes for the crippled in the cities included in the present analysis. The tendency toward special schools or large centers is quite apparent.

Certification requirements.—The Ohio cities must have their certification requirements approved by the director of education.[24] Bridgeport requires successful teaching experience; Paterson requires

[21] Prescribed Standards for Sight-Saving Classes. Op. cit., p. 3.
[22] See Table 1.
[23] See Table 11.
[24] See Prescribed Standards for Classes for Crippled Children. Columbus, Ohio, 1925.

merely graduation from normal school. Oakland specifies that the applicant shall be a regular teacher. Detroit requires the applicant to be an experienced teacher with an A or B+ rating. He must make provision for training after entering this special work. Minneapolis teachers receive a special State certificate if they have had at least two years' experience.

TABLE 11.—*Number and distribution of public-school classes for the crippled in 14 cities of over 100,000 population, 1927–28* [1]

Cities	Number of schools	Total number of classes
Akron	1	3
Baltimore	2 hospitals; 1 white; 1 colored	13
Bridgeport	1	1
Cincinnati	1 (instruction also given in 2 hospitals)	13
Cleveland	1	12
Dayton	1	3
Detroit	3; 2 convalescent homes	23
Minneapolis	2	[2] 12
New York		132
Oakland	Instruction given in pupils' homes	0
Paterson	1	2
Philadelphia	Distributed throughout city in centers	26
Seattle	5 teachers in the hospital	0
Toledo	1	8

[1] Data for this table have been obtained directly from questionnaires sent to those in charge of special classes in the various cities.
[2] Instruction is also given to some children in their homes.

Age range.—The chronological ages varied from 5 to 18. The average minimum age was 5.6 and the average maximum 19.7.

Mental ages extended from 4 to 18. The average minimum age was 4.9 and the average maximum 15.9.

The minimum I. Q. ranged from 50 to 71 with an average of 66. The maximum varied from 105 to 127, with an average of 119.

Segregation and classification.—All of the cities reported that they do not segregate by sex or color, with the exception of Baltimore, which has separate classes for colored children. None of the cities reported attempts to classify crippled children by intelligence except Minneapolis, which employs the Binet classification. Cincinnati has two classes for the doubly handicapped.

High-school instruction.—In most cases crippled children may attend high school, but few special facilities are afforded. In the special classes the ninth-year level is usually the highest grade.

Physical standard.—Inability to attend the regular school because of physical condition was the usual physical criterion for admission to these classes.

Mental standards.—Ohio cities must not admit children having intelligence quotients of less than 70 if they desire to claim State aid. Detroit specifies a minimum mental age of 5 and an I. Q. of 60 or over. Minneapolis maintains a backward class with I. Q.'s ranging from 70 to 80, and a regular class in which the pupils have I. Q.'s of 80 or over. Paterson requires a mental age of 5 or over. The

other cities either specify an I. Q. of 70 or stipulate that the pupil is not to be subnormal.

School program.—School time per day varied from 4 hours and 15 minutes in three cities to 5 hours in Bridgeport and Cincinnati. This time is exclusive of the noon lunch and any other rest or recess periods during the day. The average time was 4½ hours daily.[25] The earliest classes started at 8.30, and 3.30 was the latest closing hour. Lunch periods varied in length from 30 to 75 minutes. Rest and recess periods differed greatly.

Time allotment.—The percentage of school time devoted to academic instruction varied from 60 in Cincinnati to 76 in Dayton. The average was 73. Manual training varied from 5 per cent in Minneapolis to 25 in Toledo, with an average of 13. Physical training had a minimum value of 6 per cent in Akron and a maximum of 25 per cent in Paterson. The average was 15 per cent. There was less variation in the academic allotment than in either of the other divisions of the curriculum.

Extension activities.—Cincinnati is the only city reporting night-school facilities for the crippled. Summer instruction is provided in Cincinnati, Detroit, and Minneapolis.

Records.—All of the respondent cities emphasized the fact that very complete physical records were maintained in addition to those recording academic progress. The former usually contained a day by day statement of physical progress, as well as a record of all treatment in the school and on the outside.

Lunches.—Lunches are served without cost or at a normal charge of 5 or 10 cents. In Philadelphia breakfast is served when the pupil arrives, dinner at the middle of the day, and a light lunch in the afternoon. The pupil pays 10 cents if able to do so.

Transportation.—Transportation is furnished without cost to the pupils in all of the cities reporting. Busses, owned by the boards of education, are employed in Akron, Cleveland, Dayton, Detroit, Minneapolis, and Philadelphia. Busses, privately owned, are used in Baltimore, Bridgeport, Cincinnati, Paterson, and Toledo.

Housing.—The State of Ohio has issued very definite instructions concerning the location, size, and other necessary regulations applying to classes for crippled children.[26] These requirements are briefly as follows:

(*a*) Classes shall be as centrally located as possible; on first floor of building, near an exit; toilet facilities, and drinking fountain on same floor, and readily accessible.

[25] Home instruction has not been included. This amounts to approximately 2 hours weekly wherever it is given.

[26] Prescribed Standards for Classes for Crippled Children. Op. cit., p. 1.

(*b*) Room must be light and airy and receive some sunlight; large enough to conveniently accommodate pupils and all equipment.

(*c*) Entrances to toilet room and schoolroom should have no step nor sill.

(*d*) Cooking facilities must be on first floor or lunch room readily accessible.

(*e*) Single-pedestal adjustable seats and desks or other special seats, if necessary.

(*f*) Cots may be in adjoining room, but at least one cot to every four pupils.

(*g*) Walls and ceiling should have dull finish. Neutral color, such as buff or French gray, on walls, with dull white or cream ceiling. Rooms must be kept in good condition.

Cincinnati maintains a special school containing 13 classes. It is of fireproof construction, stucco on brick, two stories in front and three in back. There are 2 automatic elevators, 2 doctor's suites consisting of consultation rooms, 6 treatment rooms, plaster room, heliotherapy department, hydrotherapy department, dental department, auditorium, kindergarten, kitchen, lunch room, 10 classrooms, shower baths, industrial arts suite, and household arts suite.

The Dayton school, erected in 1924, is representative of the smaller type, there being but three classrooms. It is a 1-story building containing 2 classrooms, 1 manual training room, 1 for treatment, a kitchen, dining room, loom room, two toilet rooms with showers, window area equal to 40 per cent of floor space, office, and hot-air heating.[27]

Equipment.—All of the respondent cities reported that they have standard equipment. This includes movable and adjustable chairs and tables, cots and blankets, wheel chairs, kiddie cars and wagons when required, physiotherapy equipment, and special appliances for occupational work.

Cooperation with other agencies.—Among the types of assistance rendered by outside agencies were the following: Maintaining a summer camp, braces and other equipment, library, parties, books, and toys.

After-school careers.—In a number of the States rehabilitation commissions are offering further training to crippled children and placing them in positions. A number of the cities provide visiting teachers who check up on after-school progress. One city reports that it is impossible "to find any record of about 50 per cent of these children after they leave school."

Limitations, needs, and progressive steps.—The number of physicians and nurses available for the examination and reexamination of these children is usually inadequate. It seems difficult to obtain teachers having the requisite qualifications.

Some cities have made considerable progress with courses of study adapted to the shorter hours of instruction and also to the typical physical handicap. Children without the use of their arms have

[27] For a very excellent description of classes for crippled children in Ohio, see Educating Crippled Children in Ohio. State Department of Education, Columbus, Ohio, 1927. 134 pp.

been taught to write in some instances through the use of mechanical appliances.

3. THE DEAF

Forty-seven cities provided special classes for the deaf or hard of hearing during 1927–28.[28] Sixteen replied satisfactorily to a questionnaire concerning these classes.[29] This number is included under each topic discussed unless otherwise specified.

Character of enrollment.—In the classes of 29 cities there was a total average daily enrollment of 783 boys and 702 girls. The former number is 53 per cent and the latter 47 per cent of the total. Corresponding percentages for 83 city school systems for 1926–27 were 51 and 49 per cent, respectively.[30]

Maximum and minimum in a class.—The minimum number in a class ranged from 5 in Spokane to 8 in four cities; the maximum from 7 in Grand Rapids to 10 in three cities. The regulations of the State of Ohio with reference to size of classes for the deaf are briefly as follows:

(*a*) Not over 15 pupils in a multigraded class.
(*b*) Not over 12 pupils in a 4-grade class.
(*c*) Not over 10 pupils in a 5-grade class.
(*d*) If there is more than one class, 5 grades per class is the maximum.
(*e*) Not less than 5 pupils in a 1 or 2 grade class.
(*f*) A 1-grade class should number not less than 8.[31]

Number and distribution of classes.—Table 12 shows the number and distribution of classes for the deaf in the cities included in the present analysis. It is of special interest to note that each of the 16 cities has these classes centralized in one building.

TABLE 12.—*Number and distribution of public-school classes for the deaf in 17 cities of over 100,000 population, 1927–28* [1]

Cities	Number of schools [2]	Number of total classes
Akron	1	2
Birmingham	1	1
Cincinnati	1	5
Cleveland	1	18
Dayton	1 (junior-senior high school)	3
Denver	1	2
Des Moines	1 (also 1 itinerant teacher for the hard of hearing)	3
Detroit	1	[3] 32
Forth Worth	1	1
Grand Rapids	1	7
Minneapolis	1	8
New York	1	[3] 49
Oakland	1	2
Seattle	1	7
Spokane	1	2
Toledo	1	3

[1] Data for this table have been obtained directly from questionnaires sent to those in charge of special classes in the various cities.
[2] Includes deaf and hard-of-hearing classes.
[3] Number of classes estimated from enrollment.

[28] See Table 1.
[29] See Table 12.
[30] Schools for the Deaf, 1926–27. U. S. Bureau of Education Bulletin, 1928, No. 8, p. 4.
[31] Prescribed Standards for Classes for Deaf Children. State Department of Education, Columbus Ohio, 1925, p. 1.

Certification requirements.—All of the cities require that prospective teachers of the deaf shall have had special training in this field. The usual requirement is one year of special study and two years of experience.

Age range.—The chronological ages varied from 3 to 18. The average minimum age was 4.1 and the average maximum 16.8.

Mental ages extended from 3 to 18. The average minimum age was 3.8 and the average maximum 15.9.

The minimum I. Q. ranged from 70 to 75 with an average of 73. The maximum varied from 120 to 156, with an average of 134.

Prevalence of type.—Few investigations have apparently been made in the cities under consideration to determine the percentage of hard-of-hearing and deaf children among their school population. Des Moines found only 40 totally deaf children among 30,000 in the schools, or 0.13 per cent. This city also noted that 4 per cent of the pupils in grades 4 to 6 and in the junior high school were hard of hearing.

Segregation and classification.—Segregation of sexes is followed in the classes of Detroit and of the colored in Forth Worth. Cincinnati, Detroit, Spokane, and Toledo classify their pupils on the basis of intelligence.

High-school instruction.—Apparently no special classes have been established for this group in the high schools of the respondent cities, but the pupils are usually permitted to attend the regular high-school classes if they desire. Minneapolis had six deaf pupils in high school and Spokane two. One deaf pupil graduated from high school in Minneapolis in 1928, one in Oakland, and three in Des Moines. Seattle reports that 32 have thus far completed the eighth grade; 21 of this number attended high school from one to four years.

Physical standards.—The usual physical standard specified for admission into these classes is "inability to follow instruction in the regular classes because of defective hearing." Birmingham considers each case individually, having no standard criteria for admission. Minneapolis specifies 95 per cent loss of hearing in one ear, or 50 per cent in both ears. Des Moines stipulates "no voice and totally deaf" in classes for the deaf, and "loss of 24 or more units in either ear" in classes for the hard of hearing.

Mental standards.—The requirement that a deaf child shall have "normal" intelligence is specified by Dayton, Des Moines, Detroit, and Toledo. Cincinnati requires that they be "not feeble-minded" and Cleveland specifies "70 I. Q. or over."

Akron stipulates that they must have "ability to do a fair amount of work and to be taught by the oral method." Des Moines likewise requires "capability of advancing by oral method."

Several of the cities advocate the "trial" method, feeling that mental tests can not be satisfactorily administered to deaf children. Minneapolis gives a trial of one or two years, and Spokane a six weeks' trial.

Daily program.—The net length of a school day varied from 3 hours in Des Moines to 5½ in Seattle. This time is exclusive of the noon lunch and any other rest or recess periods during the day. The average time was 4 hours and 40 minutes. The earliest starting time was 8.15 in Dayton, and the latest closing hour was 3.45 in Seattle. Lunch periods varied in length from 20 minutes in Akron to 90 in Des Moines, the average being 49 minutes. Recess or rest periods ranged from zero in Dayton to two 30-minute periods in Seattle.

Time allotment.—The percentage of school time devoted to academic instruction varied from 60 in Des Moines to 93 in Minneapolis, the average being 83. Manual training varied from 5 per cent in Grand Rapids to 20 in Des Moines, the average being 9. Physical training had a minimum allotment of zero in Birmingham and a maximum of 20 in Des Moines. The academic time allotments show a greater range than either of the other divisions.

Extension activities.—Night courses are provided for the deaf in Cleveland, Denver, Fort Worth, Grand Rapids, Minneapolis, and Seattle. A private institution in Des Moines offers this instruction. Summer instruction is given only in Grand Rapids and Minneapolis.

Lunches.—Lunch is usually furnished at a nominal charge of 5 or 10 cents. In a few cases it is given free.

Transportation.—Several cities furnish free transportation. All of the others report that the deaf receive free transportation if unable to pay. Detroit and Grand Rapids take the younger children to school in a bus. In Detroit a board of education bus is used for the small children; in Grand Rapids, a privately owned bus for the younger pupils; in Toledo, a private auto bus for all the pupils. Other cities supply car fare.

Housing.—Cleveland, Detroit, and New York have large modern buildings especially constructed for the care of the deaf. The Cleveland school was built in 1913–14. It has 11 classrooms, 18 by 18, first and second floors; 3 classrooms, 22 by 24, first floor; sewing and art rooms, second floor; manual training, cooking, lunch room, and gymnasium in basement; library and auditorium, which seats 260, on the second floor.

The Ohio State Department of Education has issued the following regulations concerning classrooms for deaf children:[32]

(*a*) Room: Of average size and approved by State department. Must be bright and cheery.

[32] Prescribed Standards for Classes for Deaf Children. Op. cit., p. 1.

(*b*) Blackboard: Not less than 16 square feet per pupil enrolled, except in rooms having more than 128 square feet.

(*c*) Decorations: Dull finish. Neutral tint, as French gray, tan, or green.

Equipment.—Practically all of the cities reported the use of a gymnasium. The equipment provided in most cities included the following: Piano, victrola, charts, sense-training and lip-reading material, movable tables and chairs, mirrors, books for the deaf, and in some cases an electrophone or similar instrument.

After-school careers.—Practically all of the cities check up the career of the deaf child after he has left school.

Limitations, needs, and progressive steps.—Akron: In academic work deaf children are behind hearing children, but in manual work they do about as well. Only a fair amount of equipment has been furnished.

Cincinnati: New building is being planned and work reorganized.

Des Moines: The adult deaf have an organization for social and vocational placement. Several industries employ the adult deaf.

Detroit: City is generous in attitude toward the deaf and in providing facilities. The public needs more information as to the abilities of the deaf, so that they can be classified more from the viewpoint of the normal child.

New York: Special attention has been given to physical training. The boys have regular swimming lessons; the girls gain rhythm through dancing. A glee club has been started for those children having some hearing. A fine moving-picture machine is available for visual instruction. An aurist should be appointed to the school for the deaf. This is one of the greatest needs in our school to-day.

4. OPEN-AIR GROUPS [33]

Forty-nine cities provided special classes for children included in the above classification during 1927–28.[34] Seventeen replied satisfactorily to a questionnaire concerning these classes. The 17 cities (see Table 13) are included under each topic discussed unless otherwise specified.

Character of enrollment.—In the classes of 26 cities there was a total average daily enrollment of 2,330 boys and 2,507 girls. The former number is 48 per cent and the latter 52 per cent of the total.

Maximum and minimum in a class.—The minimum number in a class ranged from 15 in Des Moines to 30 in Akron; the maximum from 20 in Reading, Richmond, and Trenton to 30 in Akron, Hartford, and Minneapolis. The minimum and maximum were identical in four cities—Akron (30), Denver (25), Reading (20), and Richmond (20).

[33] This term includes the undernourished, anæmic, pretubercular, tubercular, and cardiac.

[34] See Table 1.

Number and distribution of classes.—Table 13 shows the number and distribution of classes for open-air groups in the 17 cities included in the present analysis. The largest school built especially for these children in any of the cities named is that in Hartford, containing eight classes. In 12 of the cities the classes are distributed among several buildings; in 4 others they are centralized in one school; Denver has but one class.

TABLE 13.—*Number and distribution of public-school open-air classes in 17 cities of over 100,000 population, 1927–28* [1]

Cities	Designations [2]	Number of schools	Total number of classes
Akron	Open window	6	12
Baltimore	Open air	10	17
Cincinnati	do	5	5
Cleveland	do	8	26
Denver	do	1	1
Des Moines	Open air and crippled	1	4
Detroit	Anæmic and tubercular	49	75
Do	Cardiac	4	5
Hartford	Open air	1	8
Memphis	do	2	5
Minneapolis	Undernourished	1	4
Do	Pretubercular	1 wing of hospital and 5 portables	
New Bedford	Open air	2	2
Do	Tubercular	1 (room in a separate building)	1
Paterson	Undernourished	8	8
Philadelphia	Nutrition and nutrition-tubercular	20	20
Reading	Open air	1	2
Richmond	do	19	20
Rochester	do	1	4
Trenton	do	1	2

[1] Data for this table have been obtained directly from questionnaires sent to those in charge of special classes in the various cities.

[2] These designations are employed by the cities indicated.

NOTE.—In this study the term "open air" has been defined as including the undernourished, anæmic, pretubercular, tubercular, and cardiac.

Certification requirements.—Two characteristics noted in the qualifications required of teachers for these classes are, first, the almost total absence of the specification of "experience," and, second, the usual absence of any requirement concerning special professional preparation. Most of the cities merely specify that the teacher shall have the qualifications necessary for a teacher in the regular grades.

Intelligence.—Chronological ages varied from 6 to 16. The average minimum age was 6.4 years and the average maximum 14.6 years.

Very few mental ages and intelligence quotients were reported for these children. It seems quite probable, therefore, that few cities give a special mental test prior to entrance into open-air classes.

Segregation and classification.—None of the respondent cities separate boys and girls in these classes. Colored children are instructed apart from white pupils in Memphis and Richmond. No cities report classification on the basis of intelligence.

High-school instruction.—Special facilities are not provided in the high schools for this group of defectives, according to the reports from the 17 respondent cities.

Physical standards.—Definite standards have not usually been established except for the underweight, and these latter vary somewhat among the different cities. The usual specification is 10 per cent underweight, but some cities accept cases as low as 7 per cent and others require 13 per cent before admission.

Mental standards.—Very few of the cities specified any particular mental standard for these groups. One requires an I. Q. of 80, and another will not accept mental defectives.

School program.—The net length of school day varied from 3 hours and 35 minutes for open-air classes in New Bedford to 5 hours in Cincinnati and Detroit. This time is exclusive of the noon lunch and any other rest or recess periods during the day. The average time was 4½ hours. The earliest starting time was 7.30 in Memphis, and the latest closing hour was 3.30 in four cities.

Lunch periods varied in length from 30 minutes in six cities to 1¾ hours in New Bedford, the average being 50 minutes; 10 cities of the 17 responding have rest periods of 60 minutes' length, 5 of the 10 cities have no additional recess time, 3 have recess periods of 20 minutes each, and 2 have periods of 10 minutes each.

Time allotment.—The percentage of school time devoted to academic instruction varied from 35 in Memphis to 89 in Minneapolis. The nearest percentage to that of Memphis was 55 in Des Moines. The average of all respondent cities was 73 per cent. Manual training varied from 0 per cent in Akron, Des Moines, Reading, and Richmond to 15 in Memphis and Paterson, the average being 9. Physical training had a minimum allotment of 4 per cent in Minneapolis and a maximum of 50 in Memphis. Considerable variation is evidenced both in academic and in physical-training allotments.

Lunches.—Ten of the seventeen respondent cities supply lunch at no cost to the pupil. Cincinnati charges 15 cents, Denver 25, Des Moines 20 cents for about 75 per cent, the others being served free. Memphis provides breakfast, dinner, and milk at three different times of the day. Paterson charges 2 cents for morning cereal, for hot lunch, and 2 for afternoon milk. Philadelphia requires the pupil to pay 10 cents or whatever he is able to pay. Richmond also makes a charge of 10 cents. A number of respondents stated that they found it much more satisfactory to make some charge for the food even though it was very small.

Transportation.—Ten cities replied that they did not transport these pupils free, although a number will do this if the child is too poor and lives at too great a distance.

Housing.—Very few of the respondent cities have erected buildings especially for the use of open-air groups, although in most cases the rooms that have been utilized seem to be well adapted to their use and satisfactorily equipped. Hartford has a brick building, especially

built for open-air group in 1921, having 8 classrooms, 2 floors, 2 sides of classrooms occupied by windows, indirect lighting, steam heat, and open-window ventilation. Large, flat roof, fenced off, is available for sun treatment.

Equipment.—The special equipment required for these classes consists of movable and adjustable chairs and desks, cots, blankets, and warm clothing. Some cities prefer the Eskimo suits, whereas others have discarded this type in favor of sweaters and caps, with a consequent saving of a considerable sum formerly spent for cleaning and repair.

After-school careers.—Half of the cities make no special effort to follow up these pupils after they leave school. New Bedford stated that many return to school to talk about their jobs; the board of health keeps in touch with them in their work. In Paterson and Trenton visits are made to the pupils' homes. The Reading Tuberculosis Association maintains close contact with the pupils in that city.

Limitations, needs, and progressive steps.—One city reports that "everything in the line of equipment has been furnished when requested." Another, not so fortunate, needs a "clinic, an indoor playroom, and enlarged sleeping rooms." Several reported inadequate facilities.

5. SPEECH DEFECTIVES

Twenty-eight cities provided special instruction for children having speech defects during 1927–28.[35] Ten replied satisfactorily to a questionnaire concerning the administration of this activity. These cities (see Table 14) are included under each topic discussed unless otherwise specified.

Character of enrollment.—Very few reports specified the number of boys and girls receiving speech instruction. Data of this character for five cities are as follows: Denver, 713 boys and 420 girls; Fall River, 108 and 32; Minneapolis, 1,746 and 1,030; Omaha, 1,497 and 996; Washington, 1,851 and 1,237. The total number of boys in these five cities is 5,915; of girls, 3,715. The boys represented 62 per cent and the girls 38 per cent of the enrollment. In four of the five cities the percentage of boys is very close to 60; in Fall River it is equal to 74 per cent of the total. In Washington, 58 per cent of all speech defectives enrolled were colored. In Omaha, 16 per cent of the speech cases were in kindergarten; in Denver, 25 per cent; and in Minneapolis, 38 per cent.

Maximum and minimum in a class.—The minimum number in a class ranged from 1 in Omaha to 10 in four different cities; the maximum, from 8 in Omaha to 15 in Boston, Denver, Detroit, and Providence.

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[35] See Table 1.

Number and distribution of classes.—Table 14 shows the number of teachers and supervisors in the 10 cities included in the present analysis.

TABLE 14.—*Number of teachers and supervisors for speech defectives in public schools of 10 cities of over 100,000 population, 1927–28.*[1]

Cities	Number of teachers	Number of supervisors	Cities	Number of teachers	Number of supervisors
Boston	15	1	Minneapolis	11	1
Cleveland	58	1	New York	28	1
Denver	2½	0	Omaha	9	1
Des Moines	1	0	Philadelphia	49	2
Detroit	32	1	Providence	3	0

[1] Data for this table have been obtained directly from questionnaires sent to those in charge of speci education in the various cities.

Additional facts concerning distribution and number of classes are given below.

Boston: 106 classes in 21 centers.

Cleveland: 101 classes; 23 are in kindergarten and 68 in the grades.

Denver: 93 classes; 11 schools have 3 classes each, 10 have 4, and 4 have 5.

Des Moines: Classes in 9 elementary schools and new junior high school.

Detroit: 293 classes; 22 schools have 2 classes each, 24 have 3, 9 have 4, 1 have 5, 3 have 6, 3 have 8, and 1 has 9.

Minneapolis: Pupils in 32 buildings are surveyed each year.

Philadelphia: Classes held in 54 elementary schools, 3 junior high schools, senior high schools, in the normal school, and in the school of practice.

Providence: Classes held in 24 elementary schools, 1 junior high school, an 4 senior high schools. Pupils from 60 schools are represented in these classes.

Certification requirements.—All of the cities require that teachers o speech correction must have the qualifications of a regular grad teacher plus additional special training. Experience is specified i only one case. Philadelphia teachers must meet the following pr fessional requirements, as formulated by the State department special education:

Minimum of 20 semester hours of special courses and training.

Experience: Up to eight semester hours will be accepted for experience speech classes or in classes for the partially deaf. (Four semester hours=1 y of experience.

Content courses: Six semester hours required, and up to 12 will be accepted anatomy of the speech organs, phonetics, psychology of speech, psychology atypical children, mental tests, physical education, etc.

Manual training: None required, but up to four semester hours accepted.

Special methods: Four semester hours required, and eight will be accepted.

Prevalence of type.—Six of the ten cities replied as to the prevale of speech defectives. Denver found 0.05 per cent in a study ma in 1926–27. Des Moines quotes 3 per cent as being the gene consensus of national surveys. Detroit, in its annual speech surv held in 1926–27, found 8,757 children with speech defects in a to

school population of 212,552, or 4.1 per cent. Minneapolis has noted a general average of 10 per cent in surveys of various schools. Omaha also estimates the percentage to be 10 as a result of seven years' observation. Philadelphia believes the percentage to be between 10 and 12.

Segregation and classification.—None of the cities report segregation by sex, color, or intelligence. There is usually a classification, however, according to age and type of defect, an effort being made to group those children of approximately the same age and similar defect in speech.

High-school instruction.—Classes for speech defectives are held in the high schools of 7 of the 10 cities.

Mental standards.—An intelligence quotient of 70 is usually specified for entrance into the speech class, although those with a lower intelligence will be admitted by special request.

School program.—The time allotted in the various cities differs greatly. The replies of the cities follow:

Cleveland: One hour a week per class.

Denver: 40 minutes per week.

Des Moines: 20, 25, 30, or 50 minutes per week, depending on speech defect and size of class.

Detroit: 66 to 75 minutes twice weekly.

Minneapolis: 20 to 45 minutes several times weekly. Length of period depends on age of child and severity of defect.

Omaha: Each child receives from 15 to 45 minutes' instruction per week.

Providence: 40 minutes to 1 hour weekly, although a few schools have two periods per week.

Philadelphia: 30-minute periods four to five times per week.

Extension activities.—Of the 10 respondent cities, Detroit and Philadelphia are the only ones that report having night-school classes for speech defectives. Summer classes for such children are held in Cleveland, Denver, and Philadelphia. The latter city has seven such classes.

Transportation.—This is furnished free only when the speech center or clinic is beyond a certain distance from the pupil's home.

Housing and equipment.—None of the cities report special rooms constructed for speech classes except in Detroit, where "all new buildings are provided with a special speech room." In most cases any available room in the building is utilized.

The equipment in the speech classes of Detroit consists of 15 movable desks, a large mirror on a stand, small mirrors, books, and charts. The mirrors, books, and charts are standard equipment in all of the cities. Minneapolis also provides for these classes three cots with blankets.

After-school careers.—Boston reported that speech defectives were carefully followed up. Cleveland carries this out to a certain extent,

but "not systematically." Minneapolis checks up, as much as possible, on pupils who have been in classes for speech correction. The other cities do very little along this line.

Percentage of speech defectives cured during 1927–28.—Cleveland, 118 stutterers and 880 phonetic cases in a total of 2,174, or 46 per cent; Denver, 56 per cent; Des Moines, 75 per cent; Detroit, 42 per cent; Minneapolis, 59 per cent; New York, during 1926–27, 5,786 major speech defects were corrected and 8,606 were improved; Omaha, 8.6 per cent; Providence, 60 per cent.

Limitations, needs, and progressive steps.—Boston sums up her attitude toward speech-defective pupils as follows: "The Boston public schools are giving these children new life—by careful classification of defects, by identification with the department of school hygiene, by follow-up work, by cooperation with the regular grade teacher, and finally, by the adoption of a method of correction which frees the children from isolation, ridicule, and retardation."

New York: (*a*) Progressive steps—(1) Correction of a great number of defects among training school candidates; (2) pursuit of post-graduate studies by teaching members of department. (*b*) Limitations—(1) Lack of speech teachers in high schools, evening and summer schools; (2) lack of allowance for books, charts, and other essential material.

Philadelphia: The director reports that there has been fine accomplishment in speech correction. Speaking of stammering and stuttering, she writes: "These speech defects are more commonly found among adolescent children, so that placement of speech teachers in schools dealing exclusively with the adolescent children is imperative."

C. Disciplinary Problems

Twenty-eight cities provided special classes for problem children during 1927–28.[36] Ten replied satisfactorily to a questionnaire concerning these classes. The 10 cities (see Table 15) are included under each topic discussed unless otherwise specified.

Character of enrollment.—In the classes of 20 cities there was a total average daily enrollment of 3,198 boys and 286 girls. The former number is 92 per cent, and the latter 8 per cent of the total. Five cities supplied comparable data concerning the number of colored pupils in disciplinary classes. Cincinnati had an enrollment of 23 colored boys in a total of 72 boys; Los Angeles had 50 in 536; New Orleans, 83 in 159; Paterson, 2 in 24; Washington, 134 in 224. The last city also had 16 colored girls and 4 white girls in disciplinary classes.

Maximum and minimum in a class.—The minimum number in a class ranged from 15 in Richmond to 20 in Baltimore, Cleveland, Detroit

[36] See Table 1.

and Cincinnati. Los Angeles and Paterson have not established minima or maxima for these classes.

Number and distribution of classes.—Table 15 shows the number and distribution of classes for incorrigible children in the 10 cities included in the present analysis. It will be noted that practically every city has grouped these classes into a single school building.

TABLE 15.—*Number and distribution of public-school classes for disciplinary problems in 10 cities of over 100,000 population, 1927–28* [1]

Cities	Type of school [2]	Kind of pupils	Number of schools	Total number of classes
Baltimore	Disciplinary	White boys	2	2
Do	Parental	do	1	2
Cincinnati	do	Boys	3 (cottages)	3
Do	do	Girls	4 (portable houses)	2
Cleveland	Truant	Boys	1	40
Detroit	Truant and delinquent	do	1	13
Los Angeles	Maladjusted	do	5	39
Memphis	Disciplinary	do	1	1
New York	do	Boys and girls	2	43
Do	Parental	Boys	1	11
Paterson	Disciplinary	do	1	1
Richmond	Delinquent	White boys and girls	1	2
		Colored boys and girls	1	1
Seattle	Parental	Boys	1	4
Do	do	Girls	1	2
Do	do	Boys and girls	1	2

[1] Data for this table have been obtained directly from questionnaires sent to those in charge of special classes in the various cities.
[2] Type designated in reply from city.

Certification requirements.—None of the respondent cities specified any special requirements for teachers of disciplinary classes.

Intelligence.—Chronological ages varied from 7 in Baltimore and Cleveland to 24 in Los Angeles. The average minimum age was 8.4 years and the average maximum 17.1 years.

Mental ages extended from 5 in Detroit to 16 in half of the cities. The average minimum was 6.8 years and the average maximum 15.1.

The minimum I. Q. ranged from 30 to 80, with an average of 60.5. The maximum varied from 102 to 146, with an average of 122.

Segregation and classification.—All of the schools of the 10 cities are for boys only except the following: The parental schools for girls in Cincinnati and Seattle, certain disciplinary classes of New York, and Richmond, and the detention home of Seattle. In the latter institution the boys attend classes for half of the day and the girls for the other half.

No colored children are admitted into the disciplinary classes or parental school of Baltimore nor the Cincinnati Parental School for Girls. Colored and white children are in the same classes in Cleveland, Detroit, Los Angeles, Cincinnati Parental School for Boys, and Seattle. They are segregated in Memphis and Richmond.

High-school instruction.—None of the respondent cities reported that they gave high-school instruction to delinquent pupils except

Los Angeles, Cleveland and Seattle (in the detention home). Cleveland stated that four would graduate from high school in June, 1929, and Seattle reported one graduating in June, 1928.

Mental standards.—Five of the ten cities have established mental standards for admission. These are as follows: Cincinnati (parental schools), not under 80 I. Q.; Cleveland, ability to profit; Memphis, not under 75 I. Q.; Richmond, no white pupil under 75 I. Q.; Seattle, accept very few under 70 I. Q.

School program.—The least net school time reported for disciplinary classes was 4 hours and 40 minutes in Los Angeles; the most was 6½ hours in Cleveland. The average time was 5.4 hours.

The net time for residential schools ranged from 4½ hours in Baltimore and Seattle to 6 hours in the Girls' Parental School of Cincinnati. The average time was 5.1 hours. This time in each instance is exclusive of all lunch and recess periods.

The earliest starting hour for the classes was 8.30 in Cleveland and Paterson; the latest closing time was 4 o'clock in Paterson.

The earliest starting time for the residential schools was 8.15 in the Cincinnati School for Boys; the latest closing period was 4 o'clock at this same school and at the Seattle Detention Home for Boys and Girls.

Time allotment.—Disciplinary classes: The time given to academic instruction varied from 33⅓ per cent in Los Angeles to 88 in Memphis, the average being 65. Manual training required from 8 per cent of the time in Memphis to 40 in Cleveland, the average being 23. Physical training ranged from 4 per cent in Memphis to 33⅓ in Los Angeles, the average being 12. Los Angeles allowed 33⅓ per cent for each activity. Great variation is indicated in the preceding figures.

Residential schools.—The allotment for academic instruction ranged from 50 per cent in the Seattle Parental School for Girls to 95 per cent in the detention home of the same city. Manual training was allotted from zero time in the Seattle Detention Home to 50 per cent in the girls' parental school of that city. Physical training data were too meager for comparative purposes. It is significant to note that of the four cities reporting residential schools, the extremes in time allotment were confined to Seattle.

Extension activities.—Night-school facilities for those having delinquent tendencies are provided in Los Angeles alone of the 10 cities considered. Summer instruction for this group is given in Cincinnati, Cleveland, Detroit, Los Angeles, and Memphis.

Lunches.—Lunch is not furnished free in any of the day classes except where a pupil is very poor. The parental schools, on the other hand, make no charge whatever for food.

Transportation.—Transportation is not supplied free in any of the seven cities reporting day classes except in Cleveland. This city has

a central disciplinary school containing 40 classes. Trolley-car tickets were given to 750 pupils attending this school in 1927–28. Detroit, which has a central school of 13 classes, gives free car tickets if the pupil lives beyond 2 miles from the school. These tickets were supplied to 230 pupils of the disciplinary school in 1927–28.

Housing and equipment.—Cincinnati (boys' parental): There are three cottages; 24 boys in each. One is for white and colored boys 9 to 12 years old, another for white boys 12 to 16 years, and the third for colored boys 10 to 16 years of age. Gymnasium equipment is available.

Cincinnati (girls' parental): There are four portable houses; one floor only. The houses contain a total of 10 classrooms, a recreation and service room, one for household arts, and sleeping quarters. Each room is 28⅓ by 21⅔ feet; electric lighting; stove heat; ventilation from 10 windows; 2 doors in rear. (Gymnastic equipment was to be added in 1929.)

Detroit: An old building containing 13 classrooms is in use.

Seattle (boys' parental): No special rooms or equipment.

Seattle (girls' parental): Beautiful brick building, English type; four dormitories, the largest having nine beds. The grounds are beautifully situated on shores of Lake Washington. They occupy 9 acres, of which 1½ acres are cultivated by the girls.

After-school careers.—Few of the cities appear to follow up the after-school careers of those leaving their disciplinary classes. Those leaving the parental schools, however, are usually visited by attendance officers.

Limitations, needs, and progressive steps.—The type of work done in the parental schools seems to be well adapted to the particular needs of this group. In the Cincinnati Parental School for Boys each boy spends half of the day in the carpentry shop, in the laundry, in the sewing room, or on the farm; the other half is spent in the schoolroom. The Cincinnati Parental School for Girls teaches sewing, fine needlework, music, drawing, painting, and handicrafts. A commercial course is also provided. The Girls' Parental School of Seattle instructs in all branches of housework, including cooking, sewing, cleaning, darning, waxing and shellacking floors, etc. New York reported the following limitations and progressive steps in connection with the parental school in that city:

Progressive steps: (1) A tinsmith and paint shop were added. The boys have done a great deal of repair work.

(2) The printing shop has turned out 2,000,000 pieces of work and has saved the board of education considerable expense.

(3) There has been much enthusiasm in the care of the school grounds.

Limitations: (1) The absence of any preentrance examination by psychologists or psychiatrists. This would assist in their placement in the school.

(2) The absence of a psychologist to examine the boys in the institution.

(3) The absence of a visiting teacher to visit the boys' homes and do follow-up work.

D. Summary and Conclusions

I. THE MENTALLY ATYPICAL

1. MENTALLY SUBNORMAL

(1) In the classes of 30 cities there were enrolled 12,815 boys and 6,611 girls. The percentages are, respectively, 64 and 36. The minimum number in a class ranged from 10 to 22, the average being 15.6. The maximum number per class extended from 15 to 25, with an average of 19.2. Forty-three per cent of the classes in 22 respondent cities were distributed one to a building; 19 per cent were in schools of two classes each. Accordingly, 62 per cent of the classes were in small units, thus minimizing the possibility of having complete activities appropriate to these groups.

(2) For the certification of teachers of these classes, 7 of 22 cities require nothing further than graduation from a normal school. Twelve specify previous experience in regular or special classes. Fifteen require professional preparation. Ten specify both professional preparation and experience.

(3) Chronological ages varied from 5 to 20; the average minimum was 6.9 years and the average maximum 16.6 years. Mental ages ranged from 2 to 15; the average minimum was 4.2 and the average maximum 10.8. Minimum intelligence quotients varied from 20 to 55, with 45.8 as an average; maximum quotients extended from 68 to 92, with 81.6 as an average. The average range in the respondent cities was 34.

(4) Fourteen out of twenty-two respondent cities give medical examinations before pupils are admitted; and all but one give mental examinations. There is considerable variation among the various mental standards maintained.

(5) School time per day, in 22 cities, varied from 4 hours to 6 hours and 5 minutes. (This is exclusive of lunch and other recesses.) The average time was 4 hours and 50 minutes. The percentage of time given to academic instruction varied from 20 to 80, the average being 48. Manual training required from 10 to 60 per cent, with an average of 36. The lowest time allotment for physical training was 10 per cent, the highest 33⅓ per cent.

(6) Although some classes have been established in specially constructed buildings, most of them are located in old structures. The equipment in the classroom appears to be quite adequate in most instances. The usual practice in the centers is to have manual training facilities for the boys, cooking and sewing for the girls, and a gymnasium.

(7) Fifteen cities have made an attempt to "follow up" the pupils after they leave school. Only seven, however, report that they do this in a systematic manner.

(8) Some limitations expressed in this field are: Inability to provide sufficient classes, segregation of the mentally subnormal at too late a date, inadequate facilities for the accurate study of the children, and unsatisfactory cooperation with employers.

2. THE GIFTED

(9) The number of pupils enrolled in classes for the gifted is extremely low in comparison with the estimated number of this type in the schools.

(10) Additional subjects studied in the gifted classes include a modern language, special music appreciation, writing of poetry, algebra, and elementary sociology. Some additional activities carried on are dramatization, publication of papers, debating, and participation in various clubs.

II. THE PHYSICALLY ATYPICAL

1. The average percentages of boys and girls enrolled in the various classes were: In classes for the blind, 52 and 48, respectively; crippled, 52 and 48; deaf, 53 and 47; open air, 48 and 52; speech, 62 and 38.

2. Classes for the blind were usually distributed about the city singly or in small groups; the tendency with classes for the crippled was toward special schools or large centers; classes for the deaf were centralized in a single building in each city; open-air classes were generally distributed, although there were some special schools; speech classes were widely distributed.

3. The average minimum and maximum chronological ages were: For the blind, 7 and 17.7 years, respectively; for the crippled, 5.6 and 19.7; for the deaf, 4.1 and 16.8; and for the open air, 6.4 and 14.6. Average minimum and maximum mental ages were: For the blind, 6.6 and 15.2 years; for the crippled, 4.9 and 15.9; for the deaf, 3.8 and 15.9. Few tests were given to open-air groups and practically none at all to speech defectives. Average minimum and maximum intelligence quotients were, respectively: For the blind, 65 and 125; for the crippled, 66 and 119; for the deaf, 73 and 134. Quotients were seldom determined for the other physically atypical groups.

4. Approximately half of the cities had made studies concerning the prevalence of defective eyesight among their school population; no city had made a similar study for the crippled, very few for the deaf and the open-air groups, and somewhat over half for speech defectives.

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5. Special facilities were provided for blind children in the high schools of half of the cities, and for speech defectives in somewhat over half. Crippled and deaf children and those requiring open-air treatment were permitted to attend the regular high schools, but were seldom provided with the special facilities required.

6. Few cities appear to have a comprehensive admission procedure involving a physical, psychological, and educational examination. Physical and mental standards are frequently lacking or inadequately defined.

7. The average school time, exclusive of any rest or recess periods, was: 5 hours for the blind, 4½ for the crippled, 4 hours and 40 minutes for the deaf, and 4½ hours for open-air groups. The time per week devoted to speech defectives was extremely variable.

8. Very little attention has been paid to preschool instruction of the physically atypical child or his parent. Summer-school and night-school facilities are almost entirely lacking.

9. Housing facilities for all physical atypical groups seem to be quite satisfactory in general except for speech defectives, where satisfactory rooms are frequently unavailable. Equipment tends to conform to standard practice in the various cities.

10. While some cities are following up the after-school careers of their former pupils, the great majority are doing very little along this line. This should be done to assist these children to make the best of the training that they have received, to note how methods of instruction can be improved, and also to justify and conserve the large investment which has already been made in their education.

III. DISCIPLINARY PROBLEMS

1. Few cities make provision for the special education of incorrigible girls. Ninety-two per cent of the total enrollment of incorrigible pupils in 20 out of 28 cities having disciplinary classes were boys, and 8 per cent were girls.

2. None of the respondent cities requires special professional preparation for teachers of disciplinary classes.

3. Incorrigibility is frequently associated with low intelligence, according to the statements from the respondent cities.

4. Half of the cities give a medical examination before admission of pupils to disciplinary classes; all but two give a mental test before admission.

5. There is great variation among the cities as to the percentage of time assigned to academic instruction, manual or occupational training, and health education.

6. The follow-up of pupils leaving disciplinary classes is inadequate. Half of the respondent cities replied that they are doing nothing along that line.

Chapter III

Cost of Education of Atypical Children

It is a well-known fact that the education of atypical children is more expensive than that of pupils in the regular classes. This is due to a number of factors, prominent among which are the smaller number of pupils per class, higher salaries, special supplies and equipment, transportation, lunch, and medical and other special care. In some instances the current expense cost for exceptional children is over four times as high as that for pupils of the elementary grades. For example, a report from the Bureau of Child Accounting and Statistics of Cleveland shows that the total current expenditure per pupil (based on average daily enrollment) for the year ending June 30, 1928, was $463.71 for deaf children, whereas the same cost for pupils in grades 1 to 6 was only $91.49.[1] The facts concerning the cost of atypical education should be just as available as those for any other division of the educational system. The following analysis is an attempt to show the relative costs in this field in the large cities of the country.

In planning this study, a questionnaire was formulated containing all the items under current expense, capital outlay, and debt service which school accountants use in their reports to the Government. These inquiries were sent to the fiscal officers of boards of education of the 68 cities of over 100,000 population during March, 1929. Replies were received from 48 of the officials concerned, but it was soon noted that many of these responses were not entirely comparable. In most cases administration charges were missing; in practically no instance was any attempt made to prorate operation and maintenance charges where special classes occupied several rooms of a building. It was then determined that comparisons would have to be made on the basis of instructional costs alone. As the cost of instruction represented 76 per cent of the total current expenses in the day schools of 35 cities of over 100,000 population during 1927–28,[2] it is believed that analyses on this basis will have considerable significance. While it is not the practice of most cities to make a systematic cost analysis of their special classes, a number of them have made such a study. Among those which have come to the writer's

[1] Blue Print Summary of Current Expenditures in Day Schools, dated Sept. 29, 1928.

[2] Per Capita Costs in City Schools, 1927–28. U. S. Bureau of Education. Statistical Circular No. 12, 1929, p. 6.

attention are Boston; Cleveland; Detroit; Kansas City, Mo.; Los Angeles; Milwaukee; Portland, Oreg.; St. Louis; and Seattle. The analyses of Cleveland and St. Louis are particularly thorough. The reports of St. Louis and Seattle may be consulted by one interested in comparative cost data on parental schools.

The plan of this chapter is, first, to compare instruction costs for all special education in a city with similar costs for all day schools; second, to make the same comparison on the basis of per pupil in average daily attendance. The costs of instruction per pupil for the different types of special education are presented next. These are followed by a table comparing the instructional cost for atypical classes with the reimbursement given by the State. As transportation and lunch costs have assumed rather large proportions with atypical children, these data are likewise given. The chapter is concluded with a comparison between the salaries of teachers of elementary and of special classes. The significance of each of the above analyses will be pointed out in the sections to follow.

A. Comparative Analysis of Expenditures for Instruction

I. COST OF INSTRUCTION FOR SPECIAL EDUCATION COMPARED WITH SIMILAR EXPENSE FOR ALL DAY SCHOOLS

In presenting the following figures it is realized that it may be misleading to compare individual instructional costs in one city with those in another, since the quality and type of instruction given in the two cities may be quite different. A greater or less expenditure in a given city may be defensible from the standpoint of the objective to be attained. On the other hand, it is believed that the ratio between the cost of special education and all day-school expenditures has considerable significance. It shows at once the effort of the city in providing facilities for atypical children. In Table 16 the cities have been grouped into sections of the country in order to reveal any regional tendencies. The population rank gives an indication of size, the number 1 representing the city of largest population.

Column 5 shows the relationship between instructional [3] costs for special education and those for all day schools. The largest percentage given is 8.35 in Grand Rapids; the smallest is 0.32 in Birmingham. The tables of Chapter I, Part II, show the reasons for this great difference. Grand Rapids has provided eight types of special classes, Birmingham only two. The former city is found from Table 4 to have a high percentage of all school children in its atypical classes, and from Table 6 to be providing for a fair proportion of the probable number of various types of defectives.

[3] Instructional costs include supervision, salaries, supplies, books, and incidental expenses of instruction.

TABLE 16.—*Comparison between instructional costs for all day schools and for special education alone in public schools of 33 cities of over 100,000 population, 1927–28* [1]

Cities	Rank in population	Total expenses		Percentage of column 4 to column 3	Cost per pupil in average daily attendence		Ratio of column 7 to column 6
		All schools	Special education		All schools [2]	Special education	
1	2	3	4	5	6	7	8
NORTH ATLANTIC CITIES							
Boston	7	$11, 284, 238	$318, 000	2. 82	$95. 87	[3] $123. 40	1. 29
Bridgeport	44	1, 690, 259	49, 388	2. 92	70. 76	154. 20	2. 18
Fall River	54	1, 456, 331	105, 844	7. 26	88. 50	[3] 128. 20	1. 45
New Bedford	53	1, 331, 461	32, 061	2. 41	79. 50	185. 60	2. 34
New York	1	96, 468, 188	3, 916, 210	4. 06	102. 40	[3] 221. 00	2. 16
Paterson	49	2, 210, 017	114, 078	5. 16	101. 29	170. 20	1. 68
Philadelphia	3	18, 915, 945	[4] 1, 163, 542	6. 15	79. 90	[3] 146. 30	1. 83
Pittsburgh	9	7, 996, 792	63, 170	. 79	92. 97	[3] 193. 00	2. 07
Providence	28	2, 859, 834	145, 768	5. 09	76. 10	([5])	([5])
Rochester	23	4, 892, 981	294, 010	6. 01	107. 20	([5])	([5])
Scranton	47	1, 687, 715	11, 887	. 71	71. 20	([5])	([5])
Springfield	51	2, 395, 442	77, 235	3. 22	105. 10	194. 80	1. 85
Average				3. 88	89. 23	168. 52	1. 89
NORTH CENTRAL CITIES							
Chicago	2	34, 501, 255	1, 289, 463	3. 74	81. 74	170. 80	2. 09
Cincinnati	16	4, 952, 884	221, 307	4. 47	100. 00	173. 50	1. 74
Cleveland	5	12, 050, 500	[6] 602, 059	5. 00	88. 96	[3] [6] 139. 30	1. 57
Detroit	4	16, 489, 949	875, 383	5. 30	83. 50	[3] 102. 40	1. 23
Grand Rapids	48	2, 399, 885	200, 000	8. 35	97. 18	[3] 170. 40	1. 76
Kansas City, Mo	19	4, 647, 473	284, 088	6. 10	82. 10	142. 90	1. 74
Milwaukee	13	5, 497, 371	112, 451	2. 05	80. 90	[3] 175. 40	2. 17
Minneapolis	18	5, 542, 071	229, 806	4. 16	75. 91	[3] 164. 20	2. 16
St. Louis	6	7, 458, 301	289, 253	3. 88	81. 92	[3] 184. 20	2. 25
St. Paul	30	2, 459, 986	100, 333	4. 08	67. 31	([5])	([5])
Toledo	26	3, 389, 986	137, 077	4. 05	89. 40	180. 80	2. 02
Youngstown	50	2, 008, 430	78, 898	3. 92	69. 75	130. 60	1. 87
Average				4. 59	83. 22	157. 68	1. 89
SOUTHERN CITIES							
Baltimore	8	6, 519, 141	201, 400	3. 08	69. 10	[3] 113. 60	1. 64
Birmingham	36	2, 017, 528	6, 465	. 32	49. 15	([5])	([5])
New Orleans	17	3, 202, 578	57, 600	1. 80	65. 87	[3] 92. 50	1. 41
Richmond	38	1, 658, 822	75, 660	4. 56	61. 60	126. 50	2. 05
Washington	14	6, 521, 624	144, 740	2. 22	101. 02	[3] 195. 50	1. 93
Average				2. 40	69. 35	132. 03	1. 91
WESTERN CITIES							
Los Angeles	10	20, 501, 240	[6] 395, 376	1. 93	104. 60	[6] 197. 00	1. 88
Portland	24	3, 696, 495	96, 494	2. 60	79. 08	160. 00	2. 02
San Francisco	12	6, 009, 134	139, 869	2. 32	96. 60	[3] 246. 00	2. 54
Seattle	20	4, 030, 868	162, 377	4. 04	76. 49	93. 00	1. 22
Average				2. 72	89. 19	174. 00	1. 95
General average				3. 78			1. 90

[1] The special education data for this table have been obtained directly from the fiscal officers of boards of education and the directors of departments of special education. "Special education," as elsewhere in this study, refers only to "atypical children."

[2] The data pertaining to "all schools" have been secured from the following two bulletins: (1) Statistics of City School Systems, 1927–28. U. S. Bureau of Education Bulletin, 1929, No. 34. (2) Per Capita Costs in City Schools, 1927–28. U. S. Bureau of Education Statistical Circular, 1929, No. 12.

[3] Speech defectives are not included in this amount, inasmuch as most of their instruction is in regular classes.

[4] The cost of speech correction is not included in this total, as it is considered separately in the report of the business manager of the Philadelphia Board of Education.

[5] Unavailable data.

[6] The gifted have not been considered in this amount because of the absence of necessary data.

The average percentage of the cost of instruction for special education to the cost of instruction in all schools for the 33 cities reporting is 3.78. (See column 5 of Table 16.) If instruction in day schools is 76 per cent of all current expense,[4] then the instructional cost for special education is 2.87 per cent (3.78 per cent of 76 per cent) of current expense. This percentage is very close to those given for general control, coordinate activities and auxiliary agencies, and fixed charges, the percentages which each bear to current expenses being 3.4, 3.3, and 1.7, respectively.[5] These numbers give some indication of the relative cost of special education. The North Central cities

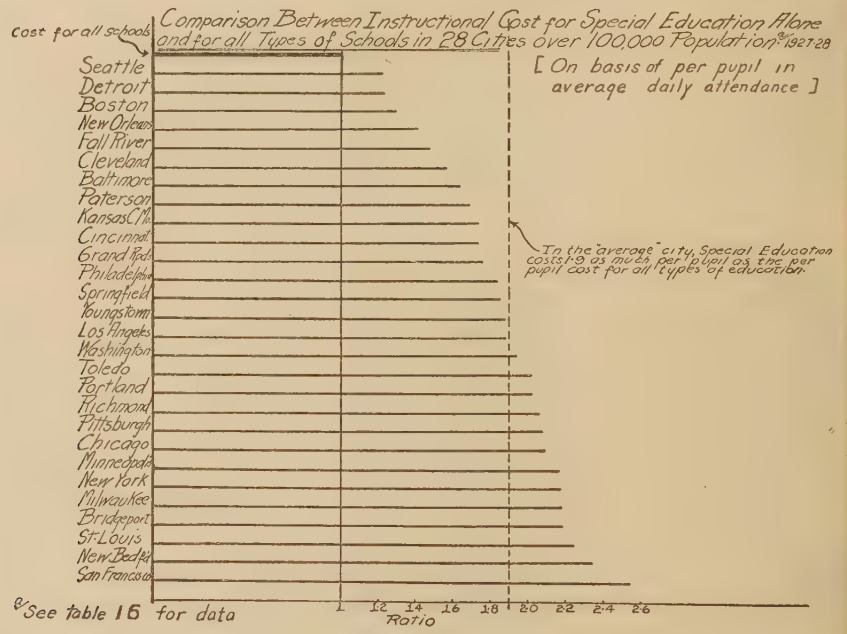

FIGURE 5

are spending more for atypical classes than any of the other groups. The average percentage that atypical instruction bears to all instruction for this group of cities is 4.59, the range extending from 2.05 in Milwaukee to 8.35 in Grand Rapids. The North Atlantic cities follow, with an average percentage of 3.88 and a range from 0.71 in Scranton to 7.26 in Fall River. The low percentage for Pittsburgh should also be noted. The average percentages for the Southern and Western cities are both low, being 2.40 and 2.72, respectively. Only two cities in these groups, Richmond and Seattle, have exceeded the country's average. Since previous chapters of this study have indicated that no section of the country is providing so many special

[4] Per Capita Costs in City Schools. Op. cit., p. 6.
[5] Ibid., p. 6.

classes as are actually required, it may be concluded from the preceding analysis that the cities having an average percentage of expenditure less than that for the entire group of cities are spending far too little for this division of their educational system.

In connection with Table 16 it is of interest to note that the instructional cost for special education in New York City ($3,916,210) is greater than the total cost for instruction in all day schools of the following cities: Bridgeport ($1,690,259), Fall River, ($1,456,331), New Bedford ($1,331,461), Paterson ($2,210,017), Providence ($2,859,-834), Scranton ($1,687,715), Springfield ($2,395,442), Grand Rapids ($2,399,855), St. Paul ($2,459,986), Toledo ($3,389,986), Youngstown ($2,008,430), Birmingham ($2,017,528), New Orleans ($3,202,-578), Richmond ($1,658,882), and Portland ($3,696,495). Nevertheless, even the large sum of $3,916,210 is not sufficient to provide adequately for the atypical children in New York City, as is shown in Tables 4, 5, and 6 of Chapter I.

The instructional cost per pupil in average daily attendance for all schools and for special classes alone are given in columns 6 and 7 of Table 16. Column 8 shows the ratio between these two types of expenditure. The average for the 28 cities responding is 1.90; the entire range extends from 1.22 in Seattle to 2.54 in San Francisco. It is of special interest to note that the average ratio for each of the four sections is very close to the general average for all the cities. Inasmuch as the North Central cities are spending more for special education than any other group, and since the relative expenditure per pupil in those cities is about the same as elsewhere, it is apparent that the North Central cities must be caring for a greater number of atypical children. The range of ratios in the North Atlantic division is from 1.29 in Boston to 2.34 in New Bedford; in the North Central group from 1.23 in Detroit to 2.25 in St. Louis. In the Southern and Western cities the lowest ratio is 1.22 in Seattle, and the highest is 2.54 in San Francisco.

In interpreting these costs it must be recalled that another large factor in the cost of educating exceptional children is the expense of transportation and lunch. In a few cases this approaches very close to the instructional cost for these pupils, as will be shown in Table 19. Thus, since the average per pupil for special class instruction is practically twice that of all instruction, and since this value is equaled at times by transportation and lunch expense, it may be seen that the average cost per atypical pupil for instruction, transportation, and lunch is in some instances four times the instructional cost for all pupils. This is a high cost per pupil and should be carefully considered in any discussion of the problem. As some of the cities of Table 16 are providing instruction to atypical children at a low cost compared with other cities, it might be desirable for the latter group to endeavor to lower

the cost per pupil, and thus be enabled to extend the facilities for these children. This is particularly desirable, inasmuch as none of the 68 cities involved in this study has provided for all of the exceptional children estimated to be resident therein.[6]

2. COST OF INSTRUCTION FOR VARIOUS TYPES OF SPECIAL EDUCATION COMPARED WITH SIMILAR DAY-SCHOOL EXPENSE

Table 17 includes the instructional charges usually grouped under this heading; that is, supervision, salaries, supplies, books, and other expenses of instruction. It does not include two other major sources of expenditure peculiar to atypical education, namely, transportation and lunch. Table 19 gives information relative to these two last factors. Averages have not been calculated for Table 17 where only several cases were involved.

If, on the basis of the figures given in Table 17, we compare the expenditure for instruction for each atypical group with the instructional cost for all schools in the North Atlantic group, it is found that the ratio for the blind is 278 per cent; for the crippled, 268 per cent; deaf, 405 per cent; open air, 206; disciplinary, 209; and subnormal, 174 per cent. Table 19 will show that transportation costs are very high in the case of crippled children, and that lunch expenditures are high for the open-air groups. These factors must therefore also be considered in comparing the "atypical" costs with expenditures for all schools. When the North Central cities of Table 17 are examined, the following ratios are found between atypical and total costs: For the blind, 284 per cent; crippled, 228 per cent; deaf 374; open air, 132; disciplinary, 195; and subnormal, 164 per cent. Because of the few cases involved and the great variation, none of the other percentages are significant, except the following for the Western cities: Crippled, 209 per cent; deaf, 335; disciplinary, 205; and subnormal, 203 per cent. Calculations dealing with the instruction of speech defectives are omitted from this analysis because the amounts specified in Table 17 for speech correction are in addition to regular elementary instruction and are thus not comparable with the other data.

[6] See Table 6, Ch. I.

TABLE 17.—*Expenses of instruction per atypical pupil in average daily attendance in various types of special schools and classes in public schools of cities of over 100,000 population, 1927–28* [1]

Cities	Rank in population	All schools	Special schools and classes only						
			Blind	Crippled	Deaf	Open air	Speech	Disciplinary	Subnormal
1	2	3	4	5	6	7	8	9	10
NORTH ATLANTIC CITIES									
Boston	7	$95.87	(2)	(2)	$371.00		$22.30	$261.00	(2)
Bridgeport	44	70.76		$250.00					$149.10
Fall River	54	88.50	$220.00		[3] 21.95	$211.11	18.96		139.00
New Bedford	53	79.50	317.00	253.00		276.00			146.30
New York	1	102.40	263.10	204.00	491.00	172.10		325.50	206.00
Paterson	49	101.29		237.50		140.20		95.60	213.50
Philadelphia	3	79.90	243.00	270.00	259.00	184.40	26.62	176.00	123.00
Rochester	23	107.20	236.00	267.00			15.40	108.00	108.40
Springfield	51	105.10				161.10			204.00
Average		92.28	255.80	246.92	[4] 373.66	190.82	20.82	193.22	161.16
NORTH CENTRAL CITIES									
Chicago	2	81.74	286.50	213.50	379.50	113.70		366.00	122.20
Cincinnati	16	100.00	(2)	299.40	(2)	152.20		96.90	161.28
Cleveland	5	88.96	370.00	192.00	376.00	100.20	2.08	145.50	155.90
Detroit	4	83.50	206.50	167.60	319.50	51.40	16.86	121.00	98.10
Grand Rapids	48	97.18	174.20	142.30	255.00	(2)	(2)	(2)	117.20
Kansas City, Mo	19	82.10	293.97	108.97	275.00	(2)		109.00	(2)
Milwaukee	13	80.90	205.00	129.20	372.00	130.40	12.18		130.00
Minneapolis	18	75.91	348.00	259.00	237.30	132.40	9.33		131.00
St. Louis	6	81.92	112.20	207.00	389.00	165.40	(2)	154.20	196.80
Toledo	26	89.40	206.72	165.60	289.00				148.20
Youngstown	50	69.75	200.50	239.50	268.71	49.46			127.50
Average		84.67	240.36	193.10	316.10	111.90	10.11	165.43	138.82
SOUTHERN CITIES									
Baltimore	8	69.10	216.00	141.20	492.00	97.00	(2)	(2)	116.40
Fort Worth	62	60.80			135.50				(2)
New Orleans	17	65.87	277.78	(2)	(2)	(2)	(2)	(2)	(2)
Richmond	38	61.60	215.50		251.03	98.75			127.80
Washington	14	101.02				200.50	5.52	203.00	186.20
Average		71.68	236.43		292.84	132.08			143.47
WESTERN CITIES									
Denver	25	88.64			238.00	(2)			(2)
Los Angeles	10	104.60	441.00	210.91	367.00			171.00	175.00
Oakland	31	106.20		221.00	318.00				(2)
Portland	24	79.08		148.40	233.00	110.80		139.30	166.00
San Francisco	12	96.60	(2)	186.40	438.00	174.60		246.00	334.00
Seattle	20	76.49	(2)	(2)	246.00			194.00	69.00
Average		91.94		191.68	306.67			187.58	186.00

[1] The cost data used in this table have been obtained directly from the fiscal officers of city boards of education. The number of pupils in average daily attendance was secured directly from special education officials of the cities concerned. Thirty-one of the 68 cities of over 100,000 population are included in the table.

[2] Unavailable data.

[3] This amount is low because it represents merely the extra instruction given to the deaf pupils by an itinerant teacher.

[4] The amount for Fall River is not included in this average.

Upon examining the preceding percentages it is noted that the average relative cost is higher in the North Atlantic, compared with the other cities, for the crippled, deaf, and open-air groups. The relative expense for disciplinary classes in the various sections is very similar, being 209 per cent, 195, and 205, respectively, in the North Atlantic, Central, and Western sections. Subnormal classes are most costly in the Western cities. Instruction for the blind is slightly higher relatively in the North Central than in the North Atlantic sections.

The variations among the actual expenditures for different atypical types is very great in some instances. (See Table 17.) The cost for blind instruction varies from $112.20 in St. Louis to $441 in Los Angeles. Corresponding ranges for the other types are: For the crippled, from $108.97 in Kansas City to $299.40 in Cincinnati; for the deaf,[7] from $135.50 in Fort Worth to $492 in Baltimore; for open-air groups, from $49.46 in Youngstown to $276 in New Bedford; for speech defectives,[8] from $2.08 in Cleveland to $26.62 in Philadelphia; for disciplinary groups, from $95.60 in Paterson to $366 in Chicago; and for the subnormal, from $69 in Seattle to $334 in San Francisco. Administrators may well study their costs in this field in an effort to determine whether such extremes in expenditures as presented here are justified by the controlling factors in their respective cities.

3. STATE REIMBURSEMENT WITH RELATION TO INSTRUCTIONAL COST OF SPECIAL EDUCATION

Sixteen of the thirty States included in this study offer special aid to the local school boards for certain types of atypical classes.[9] It is of interest to note the proportion of the instructional expense for special education which is paid by the State. Table 16 has indicated that the average ratio of atypical class instructional cost to average day-school cost is 1.9. This means that, on the average, the assistance from the State will have to be approximately one-half of the special education expenses in order that the latter net cost may not be greater to the city than the expense for other divisions of the school system. Table 18 shows to what extent this condition has been met in the case of 17 cities reporting. Nine of the sixteen States having special aid are represented by these cities. The average percentage of State aid to cost of instruction for special education is seen to be 32.8. The lowest percentage is 5.1 in the case of Scranton, and the highest is 67 in St. Paul. In this connection it should be understood that aid from the State is based not only on the cost of instruction but ordinarily includes other unusual expenditures, such as transportation and lunch.

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[7] Fall River not included.

[8] This cost is in addition to the elementary class expense

[9] See Table 7, Pt. I.

TABLE 18.—*Expenses of instruction and reimbursement from the State for education of atypical children in public schools of 17 cities of over 100,000 population, 1927–28* [1]

Cities	Expenses of instruction	Reimbursement by State	Percentage of columns 3 to 2
1	2	3	4
Cincinnati	$221,307	$74,824	33.8
Cleveland	602,059	172,161	28.6
Detroit	875,383	201,328	22.9
Grand Rapids	200,000	36,876	18.4
Kansas City, Mo	284,088	39,038	13.7
Milwaukee	112,451	53,829	47.8
Minneapolis	229,806	153,745	66.8
New York	3,916,210	1,078,997	27.5
Philadelphia	1,163,542	139,725	12.0
Pittsburgh	63,170	8,525	13.5
Scranton	11,887	600	5.1
San Francisco	139,869	43,709	31.2
Seattle	162.377	127,169	78.4
St. Louis	289,253	60,000	20.8
St. Paul	100,333	67,191	67.0
Toledo	137,077	59,812	43.6
Youngstown	78,898	20,889	26.5
Average			32.8

[1] The data of column 2 have been secured directly from the fiscal officers of city boards of education. The data of column 3 were secured from two sources—superintendents of public instruction of the States concerned and fiscal officers of city boards of education.

How do the cities of a given State compare with each other and with those in other States with respect to the relative amount of State assistance? Four Ohio cities received the following relative amounts: 33.8 per cent, 28.6, 43.6, and 26.5; two Michigan cities, 22.9 and 18.4; two in Missouri, 13.7 and 20.8; two in Minnesota, 66.8 and 67; one in Wisconsin, 47.8; one in New York, 27.5; three in Pennsylvania, 12, 13.5, and 5.1; one in California, 31.2; and one in Washington, 78.4 per cent. The highest State percentage is for Washington, 78.4 per cent; the lowest is Pennsylvania, 10.2 per cent. The average for the four cities of Ohio is 33.1 per cent; for the two in Michigan, 20.6 per cent; for the two in Missouri, 17.3; and for the two in Minnesota, 66.9 per cent. The order of the nine States as to their relative aid for special education, from highest to lowest, is, accordingly, Washington, Minnesota, Wisconsin, Ohio, California, New York, Michigan, Missouri, and Pennsylvania. Reference to Table 7, Part I, which specifies the legal basis on which State aid is administered, will clearly indicate the reasons for the variations in the preceding percentages. It is significant to note that the last two States in the above group offer aid on the per teacher basis.

B. Cost of Transportation and Lunch

Table 19 is presented to show the relationship between the cost of instruction and the cost of transportation and meals for atypical children. This brings together the two major expenditures for these children and, in conjunction with Tables 16 and 17, gives an accurate picture of the additional cost of atypical classes.

If the expense for transportation of atypical pupils in a city is divided by the actual number of those receiving this service, the

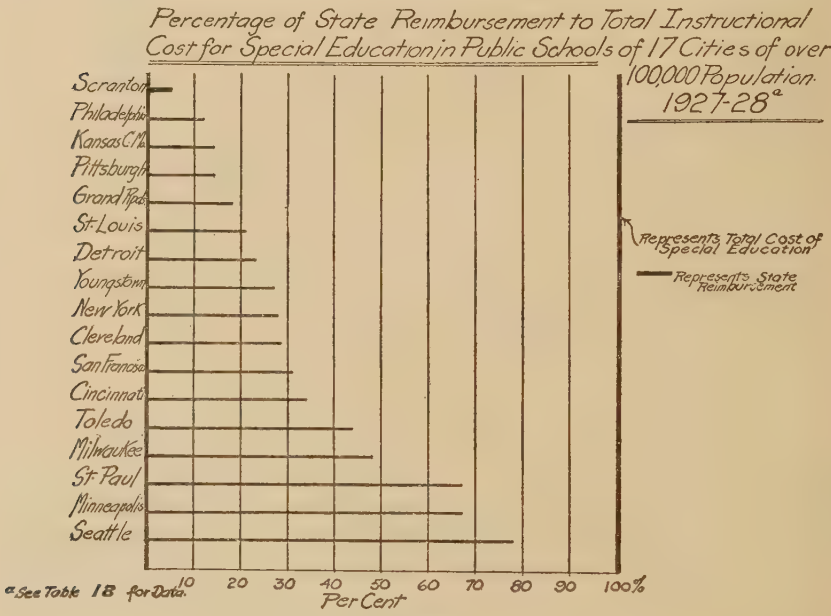

FIGURE 6

amount in many instances is very great. As an example, the figures of Cleveland will be cited.[10] For the year ending June 30, 1928, the per pupil cost for transportation of the crippled was $108.06; for the blind it was $18.34; for the deaf, $4.31; and for the incorrigible, $12.19. Costs for other atypical groups were much lower. These amounts may be compared with an expense for transportation of 13 cents per capita in all grades 1 to 7 and of 7 cents in the junior high school.

[10] Report of Bureau of Child Accounting, op. cit.

TABLE 19.—*Expenses of transportation and lunch compared with instruction in special classes of 17 cities of over 100,000 population, 1927–28* [1]

Cities (in order of population)	Blind				Crippled				Deaf			
	Instruction	Transportation	Lunch	Percentage of 2 + 3 to 1	Instruction	Transportation	Lunch	Percentage of 6 + 7 to 5	Instruction	Transportation	Lunch	Percentage of 10+11to9
	1	2	3	4	5	6	7	8	9	10	11	12
New York	$319,698	$9,565	------	3.0	$1,333,293	$200,000	------	**15.0**	$188,153	$2,750	------	**1.5**
Chicago	59,868	15,867	------	26.5	250,794	145,287	------	58.0	127,077	11,897	------	9.4
Detroit	65,120	2,272	$1,730	6.2	87,568	60,816	$7,715	78.0	59,974	1,836	$260	3.0
Cleveland	95,107	5,092	1,850	7.3	26,234	16,000	5,000	80.3	51,036	625	590	2.4
St. Louis	5,238	862	------	16.4	41,589	42,974	------	*103.2*	24,893	877	------	3.5
Baltimore	------	------	------	------	30,141	21,740	2,457	80.4	------	------	------	------
Milwaukee	8,611	2,012	144	25.1	15,248	3,856	5,503	25.6	34,958	9,365	719	28.8
Cincinnati	27,780	465	------	**1.7**	44,638	22,567	------	50.6	20,840	571	------	2.8
New Orleans	1,944	716	------	36.8	------	------	------	------	------	------	------	------
Minneapolis	22,290	1,203	------	5.4	40,967	19,502	1,446	50.9	16,623	622	438	6.4
Toledo	16,537	1,078	410	9.0	27,742	20,654	4,858	92.0	8,117	595	166	9.4
Providence	------	------	------	------	6,100	2,218	558	45.6	------	------	------	------
Grand Rapids	17,980	6,067	------	33.8	9,421	5,428	2,687	86.2	12,261	3,683	------	30.0
Paterson	6,560	2,956	------	*45.1*	6,191	2,994	------	48.3	1,699	1,165	------	*68.6*
Youngstown	10,822	544	158	6.5	7,185	3,959	418	61.0	2,150	89	73	7.5

Cities (in order of population)	Open air				Disciplinary				Subnormal			
	Instruction	Transportation	Lunch	Percentage of 14+15to13	Instruction	Transportation	Lunch	Percentage of 18+19to17	Instruction	Transportation	Lunch	Percentage of 22+23to21
	13	14	15	16	17	18	19	20	21	22	23	24
New York	------	------	------	------	$351,403	$4,750	------	**1.4**	------	------	------	------
Chicago	$174,277	$9,197	------	5.3	74,339	6,962	------	9.3	$408,446	$5,727	------	**1.4**
Detroit	100,240	2,434	$48,524	*50.9*	43,540	2,937	------	6.8	427,821	10,331	$7,715	4.2
Cleveland	69,660	490	13,100	19.5	102,698	10,120	$10.80	9.9	221,499	5,350	------	2.4
St. Louis	105,620	5,683	------	5.4	------	------	------	------	------	------	------	------
Baltimore	34,611	------	8,445	24.4	------	------	------	------	------	------	------	------
Milwaukee	25,770	1,344	8,375	37.7	------	------	------	------	19,688	2,112	------	*10.7*
Washington	------	------	------	------	28,942	3,780	------	*13.1*	------	------	------	------
Cincinnati	------	------	------	------	11,816	------	307.00	2.6	96,771	------	1,405	1.5
Minneapolis	29,385	5,990	2,703	29.5	------	------	------	------	98,884	3,402	3,668	7.2
Providence	24,012	848	5,275	25.5	------	------	------	------	------	------	------	------
Grand Rapids	------	------	------	------	------	------	------	------	42,473	880	------	2.1
Springfield	13,877	94.33	------	**.7**	------	------	------	------	------	------	------	------

[1] The data of this table have been obtained directly from the fiscal officers of city boards of education. The lowest percentage for any type is indicated by bold-faced figures; the highest by italics.

Lunch costs in Cleveland for the same period as above were as follows: For the blind, $9.54; for open-air groups, $17.77; for the crippled, $33.82; and for the deaf, $4.06. No free lunches were given to children other than to those attending special classes. No tabulation has been made as to the transportation and lunch cost per pupil in various cities, because it is believed that the total costs as given in Table 19 give a more accurate picture of the situation.

The cities have been arranged in the order of their population to see what bearing, if any, this factor has on the costs presented. No general averages have been calculated for the various atypical types because of the great variation represented. To avoid needless repetition, transportation and lunch expenses will be referred to by the term "auxiliary" in the analysis to follow. In examining column 4 of Table 19 it is noted that the ratio of auxiliary expenses for the blind to instructional expenses varied from 1.7 per cent in Cincinnati to 45.1 per cent in Paterson, the former amount being insignificant and the latter increasing the extra expense for the blind by almost half. There seems to be no relationship whatever between the percentages for the larger cities and those for the smaller ones.

The auxiliary costs for crippled children as tabulated in column 8 exhibit much less variation than is true for the blind. The percentages range from 15 in New York to 103.2 in St. Louis. Although the relative percentage in the former city is low, it will be noted that the actual amount involved is considerable, being $200,000. Omitting New York, the lowest percentage is 25.6 for Milwaukee. In a number of cases lunch costs for this group are relatively high. In Grand Rapids they represent 33 per cent of the auxiliary charges, in Cleveland 24 per cent, and in Detroit 11.3 per cent. The general average of auxiliary percentages for crippled classes in Table 19 equals 62.5 per cent.

The auxiliary expenses in classes for the deaf varied from 1.5 per cent in New York to 68.6 per cent in Paterson. In most cases they were comparatively low, although Milwaukee is represented by 28.8 per cent and Grand Rapids by 30. In the open-air classes the chief auxiliary charge is for free lunch. In Detroit this charge alone amounted to $48,524. The ratio of auxiliary expenses for this atypical group to instructional costs extended from 0.7 per cent in Springfield to 50.9 per cent in Detroit. The six cities reporting costs for disciplinary classes show a range of ratios extending from 1.4 per cent in New York to 13.1 per cent in Washington. The seven reports on subnormal groups exhibit ratios of auxiliary expenses to instructional costs varying from 1.4 per cent in Chicago to 10.7 in Milwaukee. Lunch expenses for this group in Detroit and Minneapolis are found to be large as compared with transportation; in the former city they amounted to 77 per cent of the transportation cost and in the latter to 109 per cent.

Do some cities have low auxiliary expenses for all types and other cities high costs, or is there no such uniformity? New York is low as compared with other cities for all types; Milwaukee seems to maintain

a uniform ratio for auxiliary expenses, varying from 25.1 per cent for the blind to 37.7 per cent for open-air classes. Grand Rapids reports auxiliary charges for the blind, the crippled, and the deaf of 33.8, 86.2, and 30 per cent, respectively, of instructional costs. The other respondent cities have relatively low auxiliary costs for some types and high costs for others.

In view of these varying proportions of the total expense of atypical classes represented by auxiliary expenses in the cities noted in Table 19, it seems timely to make a careful inquiry in order to determine the most economical and satisfactory mode of transportation, and to establish a reasonable procedure in the supplying of lunch. Furthermore, in the establishment of central schools we should be reasonably sure that the resulting advantage of centralization will offset the added expense due to transportation and free lunches.

C. Comparison Between Special Class and Regular Elementary Salaries

Tables 20 and 21 introduce another important factor—the salaries of special class teachers—which tends to make the expenditures for atypical classes greater than those for the regular pupils. However, it seems reasonable that the teachers of special classes should receive larger salaries if special qualifications are demanded, and this appears to be the tendency at the present time. The median salary paid elementary teachers during 1928–29 was $2,063;[12] that received by teachers of atypical classes was $2,322, an advance of 13 per cent. Of the 56 cities reporting median salaries for special class teachers, 44 had higher medians for this group than for elementary teachers, in 3 cities they were the same, and in 9 instances the salaries of elementary teachers were higher. In the entire number of 56 cities the median salary for teachers of atypical classes was $101 higher than that for instructors of regular elementary pupils. The greatest difference was in New York City where the "atypical" median was $678 higher than the elementary. The other extreme is seen in Camden, in which the median elementary salary is $636 higher than the atypical.

[11] Tabulations 1-A. Salaries Paid Teachers, Principals, and Certain Other School Employees, 1928–29, Cities Over 100,000 Population. The National Education Association, Washington, D. C., April, 1929.

TABLE 20.—*Salaries paid atypical class teachers in 1928–29 in cities of over 100,000 population* [1]

Cities	Median salary paid	Salary schedule		
	1928–29	Minimum	Maximum	Number of increments
1	2	3	4	5
United States	$2,332			
Alabama	1,525			
Birmingham	1,525			
California	2,441			
San Francisco	2,440	$1,460	$2,460	11
Colorado	2,070			
Denver	2,070	[2] 1,200	[3] 3,080	
Connecticut	1,967			
Bridgeport	2,013	([4])	([4])	
Hartford	1,983			
New Haven	1,929	1,000	2,050	
Delaware	1,800			
Wilmington	1,800	1,000	1,880	
District of Columbia	2,206			
Washington	2,206	1,400	[5] 2,600	8
Georgia	1,818			
Atlanta	1,818	1,216	[6] 2,316	
Illinois	2,582			
Chicago	2,582	1,600	2,700	
Indiana	2,025			
Indianapolis	2,025	1,300	[7] 2,800	
Iowa	1,750			
Des Moines	1,750	1,200	[8] 3,000	
Kansas	1,750			
Kansas City	1,750	1,200	1,788	9
Louisiana	1,875			
New Orleans	1,875	1,300	[9] 2,150	
Maryland	1,983			
Baltimore	1,983	1,450	[5] 2,600	
Massachusetts	1,993			
Boston	2,375			
Cambridge	1,938	1,344	1,944	6
Fall River	1,852		1,880	
Lowell	1,750	1,350	1,850	6
New Bedford	1,969		2,050	
Springfield	2,171	1,300	2,200	9
Worcester	2,054	1,400	2,200	8
Michigan	2,317			
Detroit	2,505	1,500		
Grand Rapids	2,061	1,200	2,100	
Minnesota	1,923			
Minneapolis	2,029	[10] 1,200	[11] 2,500	
St. Paul	1,740			
Missouri	2,131			
Kansas City	1,958	1,300	[12] 2,300	10
St. Louis	2,579	1,200	2,700	13
Nebraska	2,000			
Omaha	2,000	1,800	2,100	
New Jersey	2,344			
Camden	1,378		2,200	
Jersey City	2,517	1,500	3,400	
Newark	2,531	1,700	3,400	13
Paterson	2,660	1,400	3,400	
Trenton	2,240	1,400	[13] 3,100	

[1] The data of this table have been obtained from the following report: Tabulations 1–A, Salaries Paid Teachers, Principals, and Certain Other School Employees, 1928–29, Cities Over 100,000 Population. National Education Association, Washington, D. C., April, 1929.

[2] Minimum for normal-school graduation; the minimum for A. B. degree is $1,350.

[3] Maximum for A. M. degree; the maximum for A. B. is $2,880; maximum for teachers with 4 years' professional training without degree, $2,520; maximum for 3 years' professional training, $2,280; maximum for normal training, $2,040.

[4] Teachers of exceptional and crippled classes shall receive $200 beyond the regular teachers' schedule.

[5] Supermaximum salary; the normal maximum is $2,200.

[6] Supermaximum salary; the normal maximum is $2,316.

[7] Minimum for A. M. degree; for A. B. degree, $2,550; for normal school $1,800.

[8] Maximum for A. M. degree; maximum for A. B. degree, $2,590; for 3 years, $2,210; for 2 years, $1,860.

[9] Supermaximum salary; the normal maximum is $1,850.

[10] Minimum for 2 years' professional training; minimum for 4 years' training is $1,500.

[11] Maximum for 4 years' professional training; maximum for 2 years' training is $2,000.

[12] Supermaximum salary; the normal maximum is $2,100.

[13] For 4 years' training beyond high school; for 3½ years', $3,000; for 3 years', $2,900; for 2½ years', $2,800; for 2 years' or standard preparation, $2,700.

TABLE 20.—*Salaries paid atypical class teachers in 1928–29 in cities of over 100,000 population*—Continued

Cities	Median salary paid	Salary schedule		
	1928–29	Minimum	Maximum	Number of increments
1	2	3	4	5
New York	3,606			
Albany	2,044	1,500	2,300	
Buffalo	1,650	1,300	2,200	
New York	3,600	2,040	3,600	10
Rochester	2,054	1,200	2,100	
Yonkers	2,575	1,600	2,730	
Ohio	2,303			
Akron	2,025	1,400	2,500	11
Cincinnati	2,434	[14]	[14]	
Cleveland	2,409	[15]	[15]	
Columbus	2,071	1,100	2,100	10
Dayton	2,253	1,200	[5] 2,400	11
Toledo	2,322	1,350	2,340	9
Oregon	1,875			
Portland	1,875	[16] 1,300	[17] 2,500	
Pennsylvania	2,047			
Philadelphia		1,500	2,700	12
Pittsburgh	2,000	1,200	2,000	8
Reading	2,200	1,400	[5] 2,400	8
Scranton		1,200	[18] 2,200	
Rhode Island	1,939			
Providence	1,939	1,200	[19] 2,100	
Texas	1,800			
Dallas	1,808			
Utah				
Salt Lake City		900	[20] 2,000	
Virginia	1,917			
Norfolk	1,614	1,100	1,600	
Richmond	1,942	1,199		
Washington	1,982			
Seattle	2,000	1,700	2,400	
Spokane	1,850			
Wisconsin	2,427			
Milwaukee	2,427	1,200	[21] 2,000	

[5] Supermaximum salary; the normal maximum is $2,200.
[14] $150 above regular elementary salary.
[15] $150 above salary as teacher.
[16] Minimum for teachers with less than A. B.; minimum for teachers with A. B., $1,600; minimum for teachers with M. A., $1,700.
[17] Maximum for teachers with M. A.; maximum for teachers with A. B., $2,400; maximum for teachers with less than A. B., $2,200.
[18] Supermaximum; the normal maximum is $2,000.
[19] Supermaximum; the normal maximum is $1,900.
[20] Maximum for A. B. degree; the maximum for normal-school graduates is $1,800.
[21] Supermaximum; the normal maximum is $2,400.

Do cities of the same State show the same tendency with regard to the median salaries received by the two groups of teachers? Upon examining the data for Massachusetts it is seen that in each of the seven cities reporting the atypical median is higher than the elementary. In the five respondent cities in New Jersey the atypical median salaries are higher in four instances and lower in one. In New York three of the cities had higher atypical medians, and in two cases the median elementary salaries were higher. Six cities of Ohio reported higher medians for teachers of atypical classes. In Connecticut two of the three respondent cities had higher atypical medians, whereas the other city had a slightly higher median for elementary teachers.

The five States cited include all of those having three or more cities reporting. In the case of five other States, each containing two respondent cities, four reported higher medians for the instructors of atypical classes in both cities, whereas one had a higher elementary median in one city and a higher median for the other group in the second. Consequently it can be said that the general tendency in a State is for the atypical median to be higher than the median salary given to teachers of regular elementary classes.

TABLE 21.—*Difference between salaries paid regular elementary teachers and atypical class teachers in 1928–29 in cities of over 100,000 population* [1]

[Blank spaces indicate data not received]

Cities	Group receiving higher median and amount of excess		Group receiving higher minimum and amount of excess		Group receiving higher maximum and amount of excess	
	Elementary	Atypical	Elementary	Atypical	Elementary	Atypical
1	2	3	4	5	6	7
Alabama		$26				
Birmingham		26				
California		310				
San Franicsco		40		$60		$60
Colorado	$133					
Denver	133		Same.		Same.	
Connecticut		122				
Bridgeport		180		200		200
Hartford	12					
New Haven		107	Same.			100
Delaware	Same.					
Wilmington	Same.		Same.		Same.	
District of Columbia	Same.					
Washington	Same.		Same.		Same.	
Georgia		89				
Atlanta		89		100		100
Illinois		77				
Chicago		77		100		200
Indiana		15				
Indianapolis		15		300	Same.	
Iowa	85					
Des Moines	85		Same.		Same.	
Kansas		38				
Kansas City		38	Same.		Same.	
Louisiana		167				
New Orleans		167		100	Same.	
Maryland		364				
Baltimore		364		250		400
Massachusetts		67				
Boston		71				
Cambridge		95		116		56
Fall River		117				180
Lowell		50		150		150
New Bedford		69				150
Springfield		271	Same.			300
Worcester		35		200		100
Michigan		343				
Detroit		541	Same.			
Grand Rapids		61	Same.			100
Minnesota		151				
Minneapolis		20	Same.		Same.	
St. Paul		21				
Missouri		88				
Kansas City		74		100		200
St. Louis		151	Same.		Same.	
Nebraska	100					
Omaha	100			600	Same.	

[1] The data of this table have been obtained from the following report: Tabulations 1–A. Salaries Paid Teachers, Principals, and Certain Other School Employees, 1928–29, Cities Over 100,000 Population. National Education Association, Washington, D. C., April, 1929.

TABLE 21.—*Difference between salaries paid regular elementary teachers and atypical class teachers in 1928–29 in cities of over 100,000 population*—Contd.

Cities	Group receiving higher median and amount of excess		Group receiving higher minimum and amount of excess		Group receiving higher maximum and amount of excess	
	Elementary	Atypical	Elementary	Atypical	Elementary	Atypical
1	2	3	4	5	6	7
New Jersey		$173				
Camden	$636				$200	
Jersey City		496		$100		$600
Newark		58	Same.			200
Paterson		329		200		600
Trenton		239		300		300
New York		1,017				
Albany		144		400		400
Buffalo	375			100		150
New York		678		432		456
Rochester		32	Same.			100
Yonkers	29			100	105	
Ohio		289				
Akron		256		200		500
Cincinnati		30		150		150
Cleveland		157		150		150
Columbus		71		100		100
Dayton		285		100		200
Toledo		109		100		100
Oregon	307					
Portland	307		Same.		Same.	
Pennsylvania		33				
Philadelphia				300		300
Pittsburgh	Same.		Same.		Same.	
Reading		466		400		400
Scranton				200		200
Rhode Island		192				
Providence		192		200		50
Texas		116				
Dallas		26				
Utah						
Salt Lake City			Same.		200	
Virginia		423				
Norfolk		138		100		100
Richmond		430		99		
Washington		58				
Seattle	112			400	100	
Spokane		103				
Wisconsin		25				
Milwaukee		25	Same.		Same.	

How do the different sections of the country compare relative to the median salaries paid the two groups being considered? [12] An analysis of Tables 20 and 21 shows the following: The atypical and the elementary medians are, respectively, $2,316 and $2,049 in the North Atlantic region, $2,121 and $2,037 in the North Central, $1,866 and $1,779 in the Southern States, and $2,092 and $2,110 in the Western group. The North Atlantic States have a larger median salary for special-class teachers than any other section, whereas the Western States have the largest median for elementary salaries of any of the other divisions of the country. Five States show lower medians for teachers of atypical classes than for the elementary group. Two of them, Iowa and Nebraska, are in the North Central Division; one is Alabama, and the others are Colorado and Oregon, in the Western section. The North Atlantic States have distinctly better median

[12] See Table 1 for the grouping of States by sections of the country.

salaries for special-class teachers than any of the other groups, the range being $1,939 to $3,606; the Western and North Central sections are next in order, with median ranges of $1,875 to $2,441 and $1,750 to $2,582, respectively; the Southern States are last, with a range from $1,525 to $2,206.

What is the relationship between the minimum and maximum elementary and atypical salaries and what bearing has this had on the median amounts paid the two groups? [13] Fifty-two cities reported on salary schedules for teachers of special classes. In 10 of these cities, namely, Denver, Wilmington, Washington, Des Moines, Kansas City (Kans.), Minneapolis, St. Louis, Portland, Pittsburgh, and Milwaukee, the salary schedules for the two groups are the same. Seventeen cities had the same minimum salaries for the two types of teachers; 32 had a higher minimum for the instructors of special classes; none had higher minimum salaries for the elementary teachers than for the other group. Omaha had the largest difference between the two minima, this being $600.

In 13 of the 52 cities submitting data as to their salary schedules, the maxima for the two groups of teachers were the same. In 33 cities the teachers of atypical classes received higher maximum salaries; in four instances the maximum amounts received by instructors of special classes were less than those paid to the elementary group. The largest difference between elementary and atypical maxima is noted in the cases of two New Jersey cities, Jersey City and Paterson, in each of which the maximum salary received by teachers of special classes is $600 higher than that paid elementary instructors. When the minimum and maximum atypical salaries of the various States are examined, it is noted that Ohio and Massachusetts rank high in salaries paid to this group. In the former State the six cities reporting show higher median, minimum, and maximum salaries than those paid to elementary teachers. In the latter State each of the seven respondent cities had higher medians than for the elementary group, and higher maxima in six cases. The atypical minima exceeded the elementary in three instances. New Jersey, New York, and Pennsylvania likewise have provided excellent salary schedules for teachers of special classes in their largest cities.

When minimum and maximum salaries are compared with median salaries, some significant facts are disclosed. In Wilmington, Washington, and Pittsburgh medians and minimum and maximum salaries are all the same for elementary and for special-class teachers. This indicates in general a similar distribution of teachers throughout the salary range of the two groups. In a number of cities the two salary schedules are the same but the elementary median is higher than the atypical. This would seem to indicate younger, less experienced

[13] See Table 21.

teachers for the atypical classes. Cities falling into the preceding category are Denver, Des Moines, Buffalo, and Portland. On the other hand, several cities have similar salary schedules for the two groups but higher atypical medians. This would seem to indicate teachers of greater experience in the special classes of those cities. These cities are Kansas City (Kans.), Minneapolis, St. Louis and Milwaukee.

It is difficult to see the justification noted in some cities of lower salaries for teachers of exceptional children than for regular elementary instructors. Nor would it appear proper to have the same salary schedule for the two groups. Inasmuch as additional training is essential for the proper instruction of atypical children, it seems desirable to insist on special professional preparation for the teachers of atypical classes and accordingly to have a higher salary schedule for this group because of the additional requirements. If atypical children are to be given a training especially adapted to their individual needs, it is necessary that their instructors have the requisite training. Remuneration should take into consideration any additional training or experience required.

D. Summary and Conclusions

1. During 1927–28 the largest ratio of the cost of special education instruction to that for all elementary instruction was 8.35 per cent in Grand Rapids; the smallest was 0.32 per cent in Birmingham. The average percentage was 3.78 for the 33 respondent cities. The North Central cities spent relatively more for special education than the other sections of the country; the North Atlantic group followed, and the Southern and Western sections spent least. (See Table 16.)

2. The instructional cost for special education in New York City was $3,916,210, which was greater than the total cost of instruction for all types of day schools in 15 of the cities reporting.

3. During 1927–28 the largest ratio of instructional cost per pupil in average daily attendance for special education to the cost per pupil for elementary instruction was 2.54 in San Francisco; the smallest was 1.22 in Seattle. The average for all respondent cities was 1.90. This ratio for the various divisions of the country was very much the same. (See Table 16.)

4. The relative cost per pupil in average daily attendance for instruction is higher in the North Atlantic cities than in the other sections for the crippled, deaf, and open-air groups. Disciplinary instruction costs relatively the same amount in the various sections. Subnormal classes are most costly in the Western cities. Instruction for the blind costs relatively more in the North Central than in the North Atlantic section. (See Table 17.)

5. According to the reports of 17 cities, the State pays an average of 32.8 per cent of the instructional cost of special education. The

lowest percentage of aid was 5.1 for Scranton and the highest 67.0 in St. Paul. If the States represented by the preceding cities are arranged according to the relative State aid given the cities for special education, the order from highest to lowest would be as follows: Washington, Minnesota, Wisconsin, Ohio, California, New York, Michigan, Missouri, and Pennsylvania. (See Table 18.)

6. The expenses for transportation and lunch vary greatly from city to city; in some instances the transportation costs as much as the instruction. Transportation is ordinarily most expensive for the crippled, and the cost of lunch is greatest for the open-air groups. (See Table 19.)

7. Median salaries paid teachers of atypical classes in cities of over 100,000 during 1928–29 were 13 per cent higher than those received by elementary instructors. Of 56 cities reporting median salaries for special class teachers, 44 had higher medians than for regular elementary teachers; in 3 cities they were the same; and in nine instances the regular elementary salaries were higher. The North Atlantic States, on the average, have distinctly higher median salaries for teachers of atypical groups than for regular elementary instructors; the Western and North Central sections follow; the Southern gives the lowest remuneration. Of 52 cities reporting salary schedules, 10 had the same schedule for regular elementary and special teachers; 17 had the same minimum salaries for the two types of teachers; 32 had a higher minimum for the special group; none had a higher minimum for elementary teachers. In 13 cities the maxima for the two groups were the same; 33 had a higher maximum for the special group; 4 had a higher maximum for regular elementary teachers. Ohio, Massachusetts, New Jersey, New York, and Pennsylvania rank high in the salary schedules for teachers of special classes which are in effect in their largest cities. (See Tables 20 and 21.)

8. As the North Central cities are spending relatively more for special education than the other divisions, and since the relative expenditure per pupil in this group is about the same as in other sections, it is evident that the cities of the North Central section must be caring for a greater number of atypical children.

9. The various plans of State reimbursement should be studied with the view of determining the most equitable basis for special aid.

10. Because of the considerable variation in auxiliary expenses (transportation and lunch) for the various cities, a careful comparative analysis would be timely in order to determine the most economical and satisfactory manner of administering this factor in the care of exceptional children.

11. If atypical children are to be given a training especially adapted to their individual needs, it is essential that their instructors have the necessary professional preparation and experience. Salaries should be consistent with the additional training required.

Chapter IV

Organization of Educational Facilities for Atypical Children in Selected Cities

The enumeration and analysis of certain statistical data concerning special classes as presented in previous chapters will now be supplemented by a more detailed account of the organization in certain selected cities.[1] These will be chosen on the basis of population, location, and available descriptive material.

A. Cities of 100,000 to 200,000 Population[2]

RICHMOND, VA. (171,667), RANK 38[3]

Special education is under the direction of an assistant superintendent. Sight-saving, deaf, open-air, disciplinary, mentally defective, and backward classes are conducted. Of 20 open-air classes during 1925–26, there were 15 in the white schools and 5 in the colored. The number enrolled in the subnormal classes was 1.65 per cent of all the pupils. No such classes were reported in the colored schools. There are separate disciplinary schools for white boys and for colored boys and girls. These enrolled 24 and 41 pupils, respectively, during 1925–26. Ten of the group of 41 were girls. There was no provision for incorrigible white girls.

B. Cities of 200,000 to 300,000 Population

OAKLAND, CALIF. (216,261), RANK 31

Special education is under the direction of the assistant director of the bureau of curriculum development, research and guidance. The types of classes provided are designated as "X" sections, "Z" sections, subprimary, atypical, and oral deaf. Crippled children receive home instruction.

The X section (gifted group) covers an enriched course of study and finishes the 12 grades with a saving of 1 to 2 years of time. No acceleration of more than two years is permitted except after careful investigation.

The Z sections (subprimary and atypical groups) represent those pupils not able to cope with the regular work. The Z sections are for the very slow children. The course is simplified as much as

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[1] The data for this chapter have been obtained from city superintendents' reports for 1925–26, 1926–27, or 1927–28 and from personal correspondence with officials of the cities concerned.

[2] 1920 census.

[3] Rank among the 68 cities of over 100,000 population (1920 census).

possible, and the pupil is promoted whenever the teacher feels that he can profit more from the work of the next grade. A child is eligible for the Z section if (1) he is over age for grade, (2) mental test result is below normal, (3) scholarship is low, (4) and teacher's judgment agrees with the preceding data.

The subprimary class is for pupils 6 years of age who are unable to master first-grade work. They are given one-half year of preparation for the regular first grade. "Atypical classes" are for cases of serious retardation. No attempt is made to follow the standard course. In 1927–28 there were 27 of these classes, each enrolling 16 pupils, located in various centers to serve the needs of all the schools. Pupils are assigned or removed only upon approval of the supervisor of special classes. A number of mimeographed bulletins issued by the Oakland authorities, describing the plan of dealing with the mentally exceptional types, are listed below.[4]

C. Cities of 300,000 to 400,000 Population

KANSAS CITY, MO. (324,410), Rank 19

Classes for the mentally subnormal are under the direct supervision of the psychological clinic. The physically handicapped groups are directed by the board of health. Parental schools are under the vocational education department. All principal types of special education are provided for except speech instruction and classes for the gifted.

Open-air classes are maintained in cooperation with the Junior Red Cross. There are 16 rooms distributed in 13 schools. "Opportunity schools" are for mentally handicapped children. There are five such schools. The deaf and partially deaf are accommodated in one special school.

Delinquent boys receive training in a separate school (Thomas A. Edison), but there is no special provision of this type for incorrigible girls. A parental or residental school (McCune Home) is provided for white boys sent there by order of the juvenile court. The Jackson County Home is a similar institution for colored boys. Delinquent girls are sent to a parental home located at Independence, Mo.

"Ungraded rooms," 31, located in 26 of the elementary schools, are provided for children who need special help in their work. Instruction is given to crippled girls in the Presbyterian Home for Crippled Girls, to crippled children in the Mercy Hospital, and to boys in the Scottish Rite Home for Crippled Boys.

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[4] Bulletin for Atypical Class Teachers. Oakland, Calif., Bureau of Curriculum Development, Research and Guidance. March, 1926. Also bulletin discussing procedure to be followed with the "backward," or "C" pupils. No date. Same bureau as preceding.

D. Cities of 400,000 to 500,000 Population

NEWARK, N. J. (414,524), RANK 15

The types of special classes conducted are as follows: Blind and sight saving, crippled, deaf and hard of hearing, defective speech, disciplinary, subnormal, and restoration. There is no special instruction for gifted children.

Open-window classes were abolished [5] in this city in 1925–26. Nutrition classes, on the other hand, have greatly increased, the aim being to have one in every school. They are held after school hours, "so that the malnourished child does not miss his normal schooling." Two sight-saving classes, one in the northern and another in the southern part of the city, were in existence in 1927. They are for children of elementary grade. The blind children, after learning to read American Braille, are treated like sighted children, as far as possible.

The deaf are segregated in one building in 10 classes, but classes of normal children are also housed therein. A number of blind and deaf children also enter the high school, returning occasionally to their special teachers to receive assistance in their subjects. The crippled classes are all housed in a new building erected especially for their requirements.

In 1927 there were 19 speech centers to which the special teachers go on designated days. There are three disciplinary schools, two of which are designated as "ungraded." This term is used merely to distinguish them from regular grade schools located on the same street. Feeble-mineded children are instructed in "Binet" classes and schools. The younger children are instructed in these classes in the local grade schools. At the age of 12 years they are transferred to the Binet centers, in which some type of vocational training is given.[6]

E. Cities of 500,000 to 1,000,000 Population

LOS ANGELES, CALIF. (584,406), RANK 10

"The department of psychology and educational research is responsible for the selection of pupils for certain special classes and for the supervision of their instruction therein." [7] There were 14 supervisors during 1927–28. All principal types of atypical children are provided for except speech defectives Instruction is also provided in certain hospitals and for children unable to leave their homes.

There are three main groups of classes, designated by the names: Opportunity, adjustment, and development. The opportunity classes are divided into (A) classes for children of *superior* mentality and

[5] Table 1 lists Newark as having open-air classes, but, as explained in footnote 13 to that table, this designation may stand for tubercular, anæmic, undernourished, or cardiac groups.

[6] An excellent description of the Newark special classes is given in the Annual Report of the Board of Education for 1925–26 and 1926–27. This is in 1 volume.

[7] Educational Research Bulletin. Los Angeles City Schools. VII. (Sep., 1927.) p. 9.

(B) for those of *inferior* mentality but not seriously mentally defective. The opportunity B groups are usually unable to do regular academic work. Some opportunity B classes have also been organized to take care of pretubercular cases, heart cases, and children who are malnourished. They are then known as "sunshine rooms." During 1927–28 there were 15 opportunity A classes enrolling 450, and 39 opportunity B classes with an enrollment of 1,658.

The adjustment classes are designed for children whose accomplishment seems to be below that warranted by their native ability. Most of those enrolled are of average intelligence. Primary adjustment rooms enroll pupils from the first four grades; upper adjustment rooms enroll those from the fourth, fifth, and sixth grades. These classes are divided into three groups: (A) Those in which special methods and materials are used; (B) those in which special methods only are used; (C) those established for nonreaders. During 1927–28 the A group totaled 2,756 in 46 classes; the B group, 552 in 24 classes; and the C group, 132 in 5 classes.

Development schools and classes are for the mentally subnormal. In 1927–28 there were 10 development centers, averaging 10 rooms each, and 43 additional classes distributed about the city. Prevocational training is emphasized in the program of the development schools.

"Special schools" are for pupils whose behavior has necessitated their removal from the regular classes. There were 5 such elementary schools and 1 high school in 1927–28, containing a total of 34 classes, and enrolling 540 pupils. Opportunity, adjustment, and development classes are also located in the special schools.

During 1927–28 there were 5 classes for the blind, 7 for the partially sighted, and 17 for the deaf. One teacher gave special assistance to hard-of-hearing children at 9 centers. There were only 6 regular classes for the crippled, but 30 teachers, as most of this instruction is individual in the homes and hospitals.[8]

CLEVELAND, OHIO (799,798), RANK 5

The special schools and classes are under the supervision of a directing principal of special classes. All principal types of schools and classes are provided, including prevocational and Americanization classes.[9] The number of pupils enrolled in these classes on June 15, 1928, is indicated in Table 22.

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[8] For a complete description of the special classes of Los Angeles see Educational Research Bulletin. Los Angeles City Schools. Vol. V, May, 1926, and Vol. VII, September, 1927.

[9] It is of interest to know that all elementary pupils in Cleveland are classified into 3 groups according to their mental ability. They are designated as X, Y, Z sections.

TABLE 22.—*Enrollment in special schools and classes in Cleveland on June 15, 1928*[1]

Type	Elementary	Junior high	Special schools	Total
Blind and sight saving	199	83		282
Crippled (Sunbeam)			152	152
Deaf (Alexander G. Bell)			143	143
Open air	724			724
Disciplinary (Thomas A. Edison)			854	854
Mentally defective	1,464			1,464
Border line and opportunity	3,302	80		3,382
Over age	1,964	117		2,081
Preprimary	1,337			1,337
Gifted	395	235		630
Americanization	20			20
Boys' detention and farm			257	257
Girls' detention and farm			59	59
Sanatorium			101	101
Total	9,405	515	1,566	11,486

[1] The data of this table do not agree exactly with Table 4 because the latter figures represent average enrollment for the year 1927–28.

This table has been presented as an example of the variety and distribution of the special class activities in one of the larger cities. In addition to the total pupils shown, there was an average enrollment of 2,174 speech defectives during 1927–28. It will be noted that four groups of mentally subnormal children have been provided for; the large number of preprimary children under special instruction is of special significance. Six special schools have been established—for the crippled, the deaf, the incorrigible, for boys assigned by the court, for girls thus assigned, and one in connection with the tuberculosis sanatorium. Eighty-two per cent of the atypical children were in elementary classes, 4.5 per cent in junior high schools, and 13.5 per cent in special schools. The large group of gifted children in special classes, both in the elementary and junior high schools, should serve as an incentive to establish similar facilities elsewhere.

F. Cities of Over 1,000,000 Population

PHILADELPHIA, PA. (1,823,779), RANK 3

The division of special education consists of a director and 16 supervisors working under the direction of an associate superintendent. There are 517 special teachers, of which number 70 are in charge of classes for the physically handicapped, 398 work with mentally or educationally retarded children, and 49 with speech defectives. Eight auxiliary teachers act as substitutes when needed. Twelve speech clinics are held weekly, and psychological clinics are maintained twice a day and on Saturday by a staff of 10 psychologists.

Two of the supervisors are connected with the work of speech correction; one spends her time in the industrial art shops; three supervise the academic work in special classes. One of this last group of three teachers instructs during the winter at the Philadel-

phia Normal School, where a six months' postgraduate course is offered as preparation for special class teaching. There is very close cooperation between the division of special education and the divisions of home economics, physical education, industrial arts, and music.

There were 466 special classes and 98 speech classes during 1927–28.[10] Twenty-three elementary schools containing 265 classes enrolled atypical children only; the remaining classes were located in elementary schools which also contained the regular grades. From one to five special classes may be in the latter type of school. If there are five classes, shop and gymnasium work can be conducted. In the centers the classes are usually divided, first, as to social or physical development, and, second, as to their reading ability. Three-fifths of the day is given to academic work and one-fifth each to shop and gymnasium activities.

Physically handicapped children were instructed in 70 of the 466 classes. Ten of the 70 classes were for the deaf and hard of hearing; 13 for the partially sighted; 20 for the undernourished, 7 of which are for the tubercular; 26 for the crippled; and 1 for the cardiac. The crippled children are taken to and from school in busses owned by the board of education. In general, except in the case of the deaf, the physically handicapped children are given the same instructional matter as offered in the regular grades.

The remaining 396 classes, or 85 per cent of the entire number, are for children who are mentally subnormal. Thirty-three of these, designated as "restoration," are for those pupils who have fallen behind in their work primarily for reasons other than low mentality; 11 are for children who have to learn English; 36 are for disciplinary groups, about 95 per cent of whom have been found to be mentally retarded; 316 are for the backward. The tendency is for children to be assigned to the backward classes at a much younger age than formerly. Classes are also maintained in a parental school (three classes) and in hospitals and other institutions.

The children in special classes are divided into three groups—A, B, and C. Group A includes those whose responses are not socially normal and who in addition are backward; the children of group B are normal socially but backward; group C may include those who are backward or physically handicapped, or both. The first group will always require supervision; the children of group B are likely to be successful in their relation to industry; the third group should return to grade if the handicap is removed.

The grades represented in special classes are from prefirst to ninth grade. Only four pupils were in the latter grade, however, in the

[10] The numerical data for Philadelphia are for the school year 1927–28. Much of the description is a condensation of material in the Report of the Philadelphia Bureau of Special Education for the year ending June 30, 1928.

year 1927–28, being sent there because of disciplinary trouble. Of course, crippled children and those having other physical handicaps are found in the senior high schools, but they are not in special classes. A total of 9,597 boys and girls were enrolled in the special classes during 1927–28.

The special designations applied to the atypical groups in Philadelphia are: Cardiac, deaf, N. (nutrition); N. T. (nutrition tubercular), orthopedic, sight saving; O. B. (orthogenic backward); O. D. (orthogenic disciplinary), English and restoration.

In a conversation that the writer had with the director of special education during May, 1929, the latter stated that the teaching in the Philadelphia special classes was better than ever before. The director was particularly pleased with the accomplishments in speech correction and with the work of the psychological staff. It was her belief that the problem child should be segregated much earlier than has been the custom, in order to free the regular classes of these cases and to help the atypical child before his maladjustment becomes chronic. The director has endeavored to interest the authorities in the gifted child, but has thus far met with little success. There are no gifted classes in Philadelphia, although the State law indicates that they should be established if 10 or more such children are in the district. The law also stipulates that State aid will be furnished for these classes.

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QUESTIONNAIRE USED IN THIS STUDY

UNIVERSITY OF PENNSYLVANIA SCHOOL OF EDUCATION

PHILADELPHIA, PA., *March 18, 1929.*

SPECIAL EDUCATION *

Classes for the ( ) (School year:) 1927–1928
Name of city: _____.
Name of person reporting: _____.
Position of person reporting: _____.

DIRECTIONS

1. Please return completed blanks by April 8 to Robert W. Kunzig, 957 Herbert Street, Philadelphia, Pa., using the inclosed self-addressed stamped envelope.
2. If there is insufficient space, please use other side of sheet, using the number and letter as given.
3. All statistics requested are for type of class noted at top of this page, unless otherwise specified.

1. HISTORICAL

What year was this type of class first provided for in the public schools of this city? _____

2. ORGANIZATION

Grade of work	(*a*) Average daily enrollment (white and colored), school year 1927–1928			(*b*) Average daily attendance (1927–1928)
	Boys	Girls	Total	
1. Kindergarten				
2. Classes=to Grades: 1 to 6				
3. Classes=to Grades: 7 to 9				
4. Classes=to Grades: 10 to 12				
5. Total				
6. Total for colored pupils only				

* Special education (in this inquiry) includes only those types requiring special facilities or instructors because of physical, mental, or moral deviation from the average (blind, mentally defective, gifted, disciplinary, etc.).

(c) 1. The (intended) maximum number of pupils in a class is: _____.
2. The (intended) minimum number of pupils in a class is: _____.

(d) *Number and distribution of classes.*—(Do not include summer or night classes:)

		Total classes
1927	1. Classes in the regular elementary schools:	
	There were _____ regular elementary schools containing (1 class).	
	There were _____ regular elementary schools containing (2 classes).	
1928	There were _____ regular elementary schools containing (3 classes).	
	There were _____ regular elementary schools containing (4 classes).	
	There were _____ regular elementary schools containing (5 classes).	
	There were _____ regular elementary schools containing (__ classes).	
	2. Classes in schools containing this type exclusively:	
	There were _____ special schools for this type.	
	_____ contain(s) _____ classes (each).	
	_____ contain(s) _____ classes (each).	
	_____ contain(s) _____ classes (each).	
	Total in special schools _____	
	3. Grand total of classes of this type in all buildings: _____ regular grades or classes—plus special classes.	

(e)	Total enrollment in all grades (kindergarten to eighth) __ _____	1927
	or	
	Total enrollment in all grades (kindergarten to ninth) __ _____	1928
(f)	Average daily attendance in above grades _____ _____	

3. TEACHER DATA

(a) *Number of teachers.*—

		1927 1928
1.	Number of teachers for this type _____ _____	
2.	Number of supervisors for this type ___ _____	
3.	Number of principals for this type ____ _____ (Who devote their entire time to this type.)	
4.	Number of teachers in entire system _____ (1927–1928).	

(b) *Certification requirements.*—The requirements to be satisfied before one is appointed a teacher of this type (as to training—academic and professional—and experience) are:

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4. PUPIL DATA

(a) *Intelligence.*—

		Median
1.	Age range:	
	(a) Chronological ages __ _____ years to _____ years.	_____
	(b) Mental ages _____ _____ years to _____ years.	_____
2.	I. Q. range: From _____ I. Q. to _____ I. Q.	
3.	Have you any data on the retardation of this group? Yes ( ). No ( ). Check (✓). (If so, will you inclose a brief summary of your retardation figures or any printed material covering this subject.)	

(b) *Prevalence of this type.*—

1. What percentage of pupils of this type have you found among all of the pupils in your school system? _____ %.
2. How and when was this figure obtained?

(c) *Segregation and classification.*—

1. By sex:
   (a) Are boys and girls taught in separate classes? Yes ( ). No ( ). Check (✓).
   (b) 1. Boys are taught in separate classes after age of _____ years.
   2. Girls are taught in separate classes after age of _____ years.

(c) *Segregation and classification*—Continued.

2. By color:
   Are white and colored children taught in separate classes? Yes ( ). No ( ).
3. By intelligence:
   (a) Do you classify these pupils into separate groups according to mental ability? Yes ( ). No ( ).
   (b) If so, on what basis is this done?

   ---

4. By grades:
   (a) What system of grading are you using?

(d) *High-school instruction.*—

1. Do you offer high-school instruction to these pupils? Yes ( ). No ( ).
2. Number of graduates of this type from high school:

	Boys	Girls	Total
(a) January, 1928			
(b) June, 1928			

5. ADMISSION AND DISCHARGE

(a) *Admission.*—

1. By whose direction are assignments to special classes made?

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2. Medical examination:
   (a) Is this given before admission? Yes ( ). No ( ).
   (b) By whom is it given?

   (c) What is its nature?

   (d) What physical standards or criteria have you established for eligibility to this class?

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3. Individual mental test:
   (a) Is this given before admission? Yes ( ). No ( ).
   (b) By whom is it given?

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4. Group mental test:
   (a) Is this given before admission? Yes ( ). No ( ).
   (b) By whom is it given?

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5. What mental standards or criteria have you established for eligibility to this class?

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6. Standardized educational test:
   (a) Is this given before admission? Yes ( ). No ( ).
   (b) By whom is it given?

(b) *Discharge.*—

1. Under what conditions are pupils discharged from this class?

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6. DAILY PROGRAMME

(a) *School programme.*—

1. The sessions for this type extend from _____ a. m. to _____ p. m., with a noon lunch period of _____ minutes, and _____ rest or recess periods of _____ minutes each.
2. Total school time per day___ _____ clock hours, _____ minutes.
3. Total school time per week__ _____ clock hours, _____ minutes.
4. Total school time per year___ _____ clock hours, _____ minutes.

(b) *Time allotment.*—

1. Academic instruction_____ _____ % per week.
2. Manual or occupational training_____ _____ % per week.
3. Physical training and health instruction__ _____ % per week.

7. ADMINISTRATIVE DETAILS

(*a*) *Cooperation with other districts.*—
1. Are pupils from adjacent school districts received into these classes? Yes ( ). No ( ).
2. If so, on what basis is this done?

(*b*) *Preschool provisions.*—
1. Do you provide for preschool parental training for parents of children going into these classes? Yes ( ). No ( ).
2. Do you provide preschool clinics for this type? Yes ( ). No ( ).

(*c*) *Extension activities.*—
1. Is provision made for adult instruction (for this type) in night school? Yes ( ). No ( ).
2. Is provision made for summer instruction for this type? Yes ( ) No ( ).

(*d*) *Examinations.*—
1. Educational:
   (*a*) Are these pupils given standardized educational tests at intervals? Yes ( ). No ( ).
2. Mental:
   (*a*) Are they given psychological or mental tests at intervals? Yes ( ). No ( )
3. Medical:
   (*a*) How often are they given medical examinations? _____
   (*b*) What is the nature of this examination?

(*e*) *Records.*—
1. What type of educational and physical progress records do you keep and what items are included in these records?

(*f*) *Lunches.*—
1. Lunch is served without cost to pupil. Yes ( ). No ( ).
2. Lunch is served at nominal charge of _____ cents.
3. Lunch is served at regular prices. Yes ( ). No ( ).

(*g*) *Transportation.*—
1. Are these pupils transported to school free of charge? Yes ( ). No ( ). (If there are special conditions under which they are given free transportation, please specify these.)

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2. Type of vehicle:
   Auto bus ( ); trolley car ( ) _____ ( ). (Check.)
3. Ownership of vehicle:
   Board of education ( ); private agency ( ). (Check.)
4. How many pupils of this type were transported free during 1927–1928?

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8. HOUSING AND EQUIPMENT

(*a*) *Housing.*—
1. Special buildings:
   (*a*) If a new building has been erected, or an old one has been altered for the use of this type only, kindly describe the building briefly as to size and type of classroom, floor or floors on which classes are located, window area, method of lighting, heating, ventilating.

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2. Special rooms.
   (*a*) What special provisions have you made in rooms in regular elementary buildings for this type?

(*b*) *Equipment.*—
1. What is your standard equipment for a class of this type?

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2. Do these pupils have gymnasium facilities? Yes ( ). No ( ).

9. COOPERATION WITH OTHER AGENCIES

(*a*) What charitable agencies (if any) offer financial or other assistance for the education of these children in your schools?

(*b*) What is the nature of their assistance?

(*c*) What special residence institutions does the State or do other agencies provide in your city for this type?

(*d*) To which of these institutions (including hospital classes) do you send teachers?

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10. AFTER-SCHOOL CAREERS

(*a*) Do you follow up the after-school careers of these pupils? Yes ( ). No ( ).
(*b*) If so, what is your procedure?

(*c*) Can you furnish any data concerning their after-school records or types of employment? (Please inclose as a separate statement if you have this.)

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11. SPECIAL QUESTIONS (FOR TYPES INDICATED)

(*a*) *Blind.*—
1. How many volumes do you have in your school libraries in raised type? _____
2. How many volumes in heavy black type? (For the semisighted.) _____
3. Do these pupils ever recite with the normally sighted pupils? Yes ( ). No ( ).

(*b*) *Deaf or or hard of hearing.*—
1. Is every child in your school system systematically examined with some special device to test for deafness? Yes ( ). No ( ).
2. Do you give instruction in the use of the manual method of communication? Yes ( ). No ( ).
3. What percentage of your pupils were taught by the oral method in 1927–28? _____ %.
4. What special instrument (if any) do you use for improving hearing?

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5. How many pupils were taught speech during 1927–28? _____
6. The ages for cumpulsory schooling for deaf children are from _____ years to _____ years.

(*c*) *Defective speech.*—
1. What types of speech defects do you endeavor to correct?

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2. What percentage of your speech defectives were cured during 1927–28? _____ %.
3. Are the pupils called from their regular classes or are they in separate special classes?

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4. How much time is spent with this type of child per week? _____ minutes.

(*d*) *Disciplinary.*—
1. What relationship have you found between incorrigibility and intelligence?

(*e*) *Gifted.*—
1. What type of work have you provided for this type?

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12. What limitations and needs have been found, and what progressive steps have been taken in your city in connection with the type on which you are reporting?

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